

# NAAA eNewsletter

## NAAA, AirWorks and JBI Helicopters Co-Host Field Day for EPA, State Pest Control Officials, Grower Groups and Pesticide Companies in Western Tennessee Ag Country

Earlier this week, NAAA joined the University of Tennessee Ag Extension Service in educating leaders of the EPA's Office of Pesticide Programs, state pesticide enforcement officials, state and national grower groups, and pesticide manufacturing leaders. The tour's organizer, Kim Brown Pope, the Louisiana Agricultural Aviation Association's executive director and a University of Tennessee Ag Extension Service specialist, invited NAAA to present an overview of the aerial application industry, its educational programs focusing on environmental professionalism, and its efforts to register pesticides for aerial use using more accurate aerial drift modeling. She also organized a site visit for the government and industry officials at Justin and Ashley Houston's ag aviation operation, AirWorks, in Halls, Tennessee, with participation by JBI Helicopters' representatives from JBI's Lafayette, Louisiana, branch.

NAAA's participation began with a presentation to the attendees at the Jackson, Tennessee, offices of the University of Tennessee Ag Extension Service. Andrew Moore, NAAA CEO (*pictured at right*), presented an overview of the size, scope and importance of the aerial application industry and went into detail about NAAA/NAAREF educational programs from **PAASS** to **Operation S.A.F.E.** to **C-PAASS** and how those programs, through substantive education, have markedly reduced accidents and drift incidents. Moore urged state pesticide enforcement officials to incorporate the safety programs into their commercial pesticide applicator licensing programs, particularly now that the new EPA pesticide certification requirements are going into effect, requiring states to have specific aerial application content as part of obtaining/renewing their pesticide licenses.

### ***Dr. Scott Bretthauer spoke about NAAA's pesticide (re)registration efforts with the EPA.***

Dr. Scott Bretthauer, NAAA's director of policy, education and safety, presented on NAAA's efforts to (re)register pesticides for aerial use using the more realistic Tier 3 of the AgDRIFT atmospheric drift model that takes into account current-day setups, conditions, drift reduction technologies and techniques used in the aerial application industry today to mitigate drift.

### ***AirWorks' Justin Houston explained how he can modify the spray boom system on his AT-802 on the fly to reduce his swath width size.***

The western Tennessee tour also included transporting the attendees to Justin and Ashley Houston's ag aviation operation, AirWorks, in Halls, Tennessee. There, Ashley Houston gave a great demonstration of how she takes aerial application orders from their farming customers, checks **FieldWatch** for beehives and sensitive crops that might be nearby and the **EPA's BLT** for endangered species that might be nearby. Justin Houston then explained the equipment of his Air Tractor 802, including his boom/nozzle reduction system to reduce his swath by 50% when treating near a sensitive area, and how his GPS and lightbar operate to perfectly align his swaths.

### ***Representatives from JBI Helicopters' Lafayette, Louisiana, branch explained how their Bell 206L LongRanger helicopter mitigates drift while making precise aerial applications.***

Attendees then went outside, where Curt West, Tom Wolfe and Corey Fransen of JBI Helicopters explained how their Bell 206L LongRanger helicopter operates to mitigate drift yet make precise aerial applications. Fransen then piloted the aircraft atop the JBI Helicopters nurse truck, loaded the aircraft with fluorescent dye and flew across water sensitive cards and string where the Operation S.A.F.E. aircraft application calibration equipment was set up. Fransen was followed by Justin Houston in the AT-802, who demonstrated how the aircraft smoker and 50% boom shutoff system work and also flew across the Operation S.A.F.E. analysis equipment. (*Watch the video clip of Justin's demo below.*)



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Attendees were then taken back to the hanger where the string readout equipment and scanner were located to read the droplet size and efficacy of the applications that were made to the string and cards and were provided with how the analysis works to guide applicators to calibrate their application equipment to get the sweet spot droplet size and swath to make professional, targeted applications.

The field tour was a tremendous success, with a great audience of pesticide regulators, grower groups and pesticide manufacturers able to observe firsthand the professionalism and technological innovations commonplace in today's aerial application industry.

*From L-R, NAAA's Scott Bretthauer and Andrew Moore, with AirWorks LLC's Ashley and Justin Houston at their hangar.*

## NAAREF In-Season Safety Webinar Monday, June 12

NAAREF will hold an in-season safety session on Monday, June 12, at 8 p.m. CDT. The session will feature a small panel of PAASS presenters who will discuss several safety topics. The topics will be based on trends in ag accidents seen last season and this year so far.

The safety session will be presented via a Zoom webinar, during which you will be able to see and hear the PAASS presenter panelists, but they will not be able to see or hear you. If you wish to ask a question, you can use either the Q&A function or the chat option. More information on participating in a Zoom webinar, including how to use the webinar attendee controls, is available [here](#).

Please try to join the NAAREF safety session, and spread the word about the session so that others may participate. As we enter the busiest time of the season for much of the ag aviation industry, it's critical to keep safety at the forefront of everyone's thoughts.

You will need to log in with your NAAA username and password to register. NAAA membership is NOT required. Email [information@agaviation.org](mailto:information@agaviation.org) if you require username/password assistance.

## Library of Congress Unveils New Occupational Folklife Collection on Agricultural Aviation Profession

A special collection on the role of "[Crop Dusters in Rural America](#)" is available now and for posterity on the Library of Congress's website. The collection was produced by a mother-and-son team who undertook the oral history project in part to dispel outdated notions about ag pilots and the agricultural aviation profession.

In 2020, folklorist Samuel Kendrick and his mother, Ellen Kendrick, received an Archie Green Fellowship from the American Folklife Center to chronicle the occupational experiences and perspectives of agricultural pilots, operators and other figures involved in the industry. They had some familiarity with their subject matter already from living on their family farm in Richards, Missouri, near the Missouri-Kansas border. Being friends with Dusty Elkinton, the first ag pilot they interviewed, also helped. It gave the Kendricks some street cred, which helped when they looked for other aerial applicators to interview.

In 2021, they recorded interviews with 14 individuals for their agricultural aviation collection, including Missouri operator and 2023 NAAA Secretary [Sam Styron](#) (*pictured at right*), married ag pilots [Austin](#) and [Emily Daniel](#), Air Tractor President and CEO [Jim Hirsch](#), NAAA CEO [Andrew Moore](#), and the most veteran of all the ag pilots they secured, [Floyd McElwain](#), who was 85 at the time of his interview. Together, the oral histories capture the unique nature of the agricultural aviation profession and the traits common among ag pilots. The Kendricks also sought to highlight the ethics, professionalism and safety at the forefront of the decisions aerial applicators make inside and outside the cockpit to support farmers in producing a safe, affordable and abundant supply of food, fiber and bioenergy.

The [curated ag aviation interviews](#) are among the newest collections published by the Library of Congress as part of its ongoing Occupational Folklife Project and will continue to be preserved for future generations to enjoy. Anyone who listens to the Occupational Folklife interviews will come away with a better understanding of the agricultural aviation profession and a greater appreciation for the hardworking people devoted to this essential segment of agriculture.

The inclusion of an agricultural aviation collection at the Library of Congress's American Folklife Center is a welcome addition to the public record. Explore it [here](#).

## Want to Fly the Snow S-2A?

Want to fly the Snow S-2A before it becomes grounded for good? If so, please call Pete Jones of Air Repair Inc. in Cleveland, Mississippi, at (662) 846-0228 to make an appointment. This fall, the meticulously restored Snow S-2A will head to Jackson, Mississippi, to go on permanent display at the National Agricultural Aviation Museum. The S-2A was built in the 1950s by the godfather of modern ag aircraft, Leland Snow.

*Leland Snow in the Snow S-2A.*

## Air Tractor Rolling Out Modified Paint Scheme, Standard Color Options for Customers

In an effort to meet record demand, Air Tractor airplanes will be produced with a modified paint scheme, offering customers standardized color options, the company announced.

Despite supply chain difficulties, Air Tractor had a record year for deliveries in 2022. Production for 2023 and 2024 is projected to be even stronger. With demand outpacing supply, Air Tractor reflected on its mission statement pledging to “provide aircraft to help feed and protect the world.” In support of that mission, Air Tractor recognized that to meet this historic demand, a change is necessary to provide capacity in the paint department.

“Our airplanes will always look and fly like an Air Tractor,” Air Tractor President Jim Hirsch said. “Air Tractor is introducing a modified paint scheme for its agricultural airplanes. A yellow base color with blue stripes is the standard color scheme. Customers may choose white as the base color, with no upcharge, if specified at the time of order. Color choices for the main stripe and pin stripe scheme, which will be the same color, are blue, black, red and green. Our firefighting scheme will remain unchanged. These standardized choices will help the factory respond to high demand by reducing bottlenecks due to paint in the production process.”

Hirsch anticipates the new paint scheme will begin appearing on airplanes late in the third quarter or early in the fourth quarter of the 2023 production schedule. He added that the updated stripe scheme streamlines the painting process and improves Air Tractor's overall airplane production efficiency.

“Air Tractor is growing and evolving to deliver more of what our customers want. Leland Snow always pushed for continuous improvement and was driven to help our customers get their job done. Unlike the supply chain, this is within our control and supports our mission of helping feed and protect the world. We do that by getting more airplanes to the market,” Hirsch said. “Our products will evolve over time without losing the spirit of what it means to be [an] Air Tractor.”

## Proposed AD Supersedes Continental Engines Oil Filter Adapter Gasket AD

The FAA has revised its proposed Airworthiness Directive (AD) to supersede AD 2022-04-04, which requires replacing the oil filter adapter gasket on certain Continental Aerospace Technologies Inc. engines.

**NAAA reported on this in September 2022**, when the FAA first proposed an applicability change to AD 2022-04-04 along with expanded replacement gasket part numbers.

This new proposed revision changes the applicability (again) of the AD to include all Continental model engines equipped with an F&M Enterprises Inc. or Stratus Tool Technologies LLC oil filter adapter installed per Supplemental Type Certificate SE8409SW, SE09356SC or SE10348SC. These F&M and Stratus oil filter adapters are known to be installed on Continental Model C-125, C-145, GO-300, IO-360, IO-470, IO-520, IO-550, O-300, O-470, TSIO-360 and TSIO-520 series engines.

This proposed revision would continue to require the replacement of any F&M or Stratus oil filter adapter fiber gasket with a copper gasket part number (P/N) AN900-28 or P/N AN900-29, or a stainless steel PTFE gasket, P/N ST07.

To view the complete proposed AD or submit comments, click [here](#). Comments are due by July 17.

## Apply for ‘Ag Wings of Tomorrow’ Scholarship by Aug. 31

From seeking a mentor to finding the funds for training, the road to becoming an ag pilot is fraught with obstacles, but having \$5,000 in seed money certainly helps. Thanks to the generous support of BASF and Thrush Aircraft, \$20,000 in aid is available through the **2023 NAAA “Ag Wings of Tomorrow” Scholarship Program** to assist four aspiring ag pilots in their journey.

The goal of NAAA's "Ag Wings of Tomorrow" Scholarship Program is to strengthen the aerial application industry by helping operator members bring new pilots into the profession and help fund their training. Applicants must be sponsored by an NAAA Operator member. Scholarship recipients may use the proceeds for flight training or aviation or ag-related coursework at a university, college, community college or other institution of higher learning. A stipend for a trainee in an NAAA Operator-sponsored apprentice program is also permissible. The scholarship program is administered by NAAA and funded by educational grants from BASF and Thrush.

This year, NAAA will award up to four scholarships valued at \$5,000 each. Investing in aspiring ag aviators is a win-win for NAAA Operator members and individuals seeking training funds to support their pursuit of becoming a professional ag pilot.

## How to Apply

To be considered for the 2023 scholarship, along with completing the two-part application, every applicant must submit:

- **A letter of recommendation** from the NAAA Operator member sponsoring the applicant.
- **An essay of 250 words or less** explaining why the applicant wants to pursue a career in agricultural aviation and how they would use NAAA's "Ag Wings of Tomorrow" Scholarship to further their education and training.
- **A one-page résumé or list of activities** detailing all agricultural and aviation experiences, education and training.

Last year NAAA awarded \$5,000 scholarships to Ross Edwards of Sherwood, Arkansas; Tommy Koebel of Geneva, Illinois; Drew Kroeplin of Highmore, South Dakota; and Adam Jacobs of Graymont, Illinois (pictured above with his sponsor, Scott Petersen, at left, of Pontiac Flying LLC). NAAA will announce the recipients of the 2023 "Ag Wings of Tomorrow" Scholarships in December at the Ag Aviation Expo in Palm Springs, California.

## Application Process

To learn more about the 2023 NAAA "Ag Wings of Tomorrow" Scholarship, review the [application instructions and checklist](#).

Applicants must apply using NAAA's online application. A link to the online application is available below. The applicant will fill out ALL applicant and sponsor information. The NAAA Operator Sponsor must write a letter of recommendation on behalf of the applicant. Upload all required material noted in the Application Checklist and any additional supporting documentation using the turbine scholarship's online application portal.

A link to the scholarship application portal can also be found at [AgAviation.org/scholarship](https://AgAviation.org/scholarship).

Please contact NAAA at (202) 546-5722 or [information@agaviation.org](mailto:information@agaviation.org) for clarification about any of the application requirements.

While the applicant must be sponsored by an NAAA Operator member, NAAA membership is not a prerequisite for applying for the scholarship. Still, becoming an NAAA Associate member is an excellent way for candidates to learn more about the industry and augment their training.

**The deadline to apply for the 2023 "Ag Wings of Tomorrow" Scholarship is Aug. 31.**

## Restrictions

With the introduction of the new [Charles Stokes Memorial Turbine Training Scholarship](#) this year, applicants may only apply for one NAAA pilot-training scholarship per year. They can apply for the NAAA "Ag Wings of Tomorrow" Scholarship or the Charles Stokes Memorial Turbine Training Scholarship, *but not both in the same year*.

NAAA Operator members may only sponsor one NAAA "Ag Wings of Tomorrow" Scholarship applicant a year. They can also sponsor a Charles Stokes Memorial Turbine Training Scholarship applicant in the same year, but the applicants cannot be the same person applying for both scholarships in the same year.

Two \$3,000 scholarships are available for turbine training to eligible NAAA Operator and Pilot members applying for the [2023 Charles Stokes Memorial Turbine Training Scholarship](#).

## Supreme Court Decision Limits the Types of Wetlands Considered Waters of the U.S. and With It the Scope of Clean Water Act Enforcement

On May 25, the Supreme Court of the United States (SCOTUS) ruled that wetlands are only considered Waters of the U.S. (WOTUS) and under the enforcement provision of the Clean Water Act (CWA) when it is "a relatively permeable body of water connected to traditional interstate navigable waters"—and that the wetland "has a continuous surface connection with that water, making it difficult to determine

where the 'water' ends and the 'wetland' begins."

The Supreme Court case in particular dealt with the Sackett family in Priest Lake, Idaho, who were told by the EPA and Army Corps of Engineers officials 16 years ago that their residential lot was on a protected wetland and hence they could not build a residence there. They were threatened with daily fines unless they applied for a federal permit. Instead, the Sacketts sued the government. A previous decision by the 9th U.S. Circuit Court of Appeals ruled in favor of the government, but last week's decision reverses the lower court, and the **Supreme Court unanimously ruled that "The wetlands on the Sacketts' property are distinguishable from any possibly covered waters."** The court was split 5-4 on the court's new "test," which stated that only wetlands with a continuous surface connection to a body of water are covered by the law.

This decision has national implications for agriculture, development and the Biden administration's recently promulgated WOTUS rule that includes small bodies of water, including those on private land and farms, if they had a "significant nexus" to navigable waterways as waters of the U.S. and under Clean Water Act regulations. That definition included tributaries, adjacent wetlands and streams, and even ephemeral waters, such as dry tributary beds, if they alone or in combination with similarly situated water significantly affected the chemical, physical or biological integrity of protected waterways.

NAAA was part of an effort to prevent the administration from developing its WOTUS definition until after the Supreme Court's decision on the Sackett case. Legal experts believe the SCOTUS ruling, such as Justice Alito's opinion language that "we hold that the CWA extends to only those 'wetlands with a continuous surface connection to bodies that are 'waters of the United States' in their own right,' so that they are 'indistinguishable' from those waters," will trim the jurisdiction of the EPA to regulate waters under the Clean Water Act to interstate and navigable waters and immediately adjacent wetlands. And that it will be a return to the traditional understanding of what Congress passed in the early 1970s. The Clean Water Act of 1972 gave the EPA the authority to regulate navigable waters in the United States. The decision will mitigate the area of waters that require NPDES pesticide general permits under the CWA—a duplicative and unnecessary regulation due to FIFRA rules and regulations already testing for the safety of pesticides to water and many other environmental criteria before being approved for use.

## Report Illegal Drone Applications

NAAA receives constant reports from commercial manned and unmanned aerial application businesses about drone application work that is being conducted outside of the law. NAAA has been told that unregistered drone activities, in addition to allegations that label directions, including required gallons of carrier per acre, active ingredient measurements per acre and boom length limits, are being violated. Professional commercial applicators that apply by air—either as part of a farming business or a separate aerial application business—must be licensed.

A small drone that weighs less than 55 pounds can be flown for work or business if the operator becomes an FAA-certified drone pilot under Federal Aviation Regulations, Part 107. Those requirements, including registering one's drone, may be found [here](#).

To operate a drone over 55 pounds, an operator must follow the requirements under 49 U.S.C. 44807, which can be found [here](#).

An aerial application—whether manned or unmanned—conducted by a farmer or commercial applicator must also have an agricultural aviation operator certificate under 14 CFR Part 137. Those requirements may be found [here](#).

In addition, an aerial applicator, whether manned or unmanned, making a commercial application must be licensed as a professional commercial applicator in the state(s) in which they are operating. A list of the state pesticide enforcement agencies that license commercial applicators may be found [here](#). Most states are treating drone applications the same as manned aerial applications, which means drone operators must follow all label instructions in the aerial section of the label, including droplet size, application height and boom length.

Enforcement against an individual or persons violating these provisions can be taken by reporting violations to the state pesticide enforcement officials, found [here](#), or the FAA's Flight Standards District Offices, found [here](#).

## FAA's GA Survey Data Collection for 2022 Entering Final Stretch: Please Participate if Invited

The FAA's annual General Aviation and Part 135 Activity Survey (GA Survey) is entering the final stretch. There are still a few weeks to go, and we need everyone who is invited to participate. If you are selected to participate in the GA Survey, you will receive an email or postcard invitation asking you to complete the survey online. Please participate in the survey if asked!

The survey is for collecting aviation activity for the calendar year 2022. The GA Survey is the only source of information available that provides reliable data on the GA fleet, including the number of aircraft and hours flown. The data is used by the FAA, other government agencies and the aviation industry for a variety of things, including assessing safety and understanding the economic impact of aviation.

The GA Survey is especially critical to the agricultural aviation industry. NAAA uses the results of the GA Survey, in conjunction with NTSB accident numbers, to calculate an overall accident rate and a fatal accident rate for Part 137 operations. This allows NAAA to track and document the safety of the agricultural aviation industry and provide evidence to the FAA and NTSB that PAASS and other safety programs are working to reduce Part 137 accidents. This is especially helpful in the event additional regulations may be proposed.

Participation in the GA Survey is voluntary, but the agricultural aviation industry needs your input if you are selected to participate. For those who chose not to complete the survey online, a mail survey is sent that includes a postage-paid return envelope. The information is confidential and will only be used for statistical purposes; it will not be published or released in any form that would reveal an individual participant. It only takes 10 to 15 minutes to complete the survey.

If you are contacted, please respond to the survey even if you did not fly your aircraft during 2022, sold it, or if the aircraft was damaged. If you own three or more aircraft, there is an abbreviated survey form you can use instead of needing to complete a survey for each aircraft.

About 30% of the total number of GA aircraft are surveyed every year, so you may be asked to participate two or more years in a row. If you have questions, please contact Tetra Tech, the independent research firm that conducts the GA Survey for the FAA, toll-free at 1-800-826-1797 or by email at [infoaviationsurvey@tetratech.com](mailto:infoaviationsurvey@tetratech.com). Results from prior surveys can be found [here](#).

## FieldWatch Expands SeedFieldCheck to 3 New States

FieldWatch Inc., a non-profit company that promotes improved communication and stewardship among crop producers, beekeepers and pesticide applicators, has expanded its SeedFieldCheck registry into three new states for the 2023 growing season. With this year's expansion into Minnesota, Ohio and Wisconsin, it is now available in eight states.

SeedFieldCheck integrates into the existing FieldWatch crop and apiary registry and enables seed companies to communicate the location and presence of seed field workers more effectively to pesticide applicators. In 2020, FieldWatch launched the SeedFieldCheck pilot program in Iowa in partnership with the Iowa Seed Association and Iowa Agricultural Aviation Association. In 2021, the SeedFieldCheck registry added four more states: Indiana, Illinois, Michigan and Nebraska. Positive feedback from aerial applicators and seed companies prompted FieldWatch to continue expanding SeedFieldCheck into new states.

"FieldWatch is proud to be a trusted partner in facilitating communication across agriculture," FieldWatch CEO Bob Walters said. "Following SeedFieldCheck's successful pilot launch in Iowa, we're excited for even more member states to benefit from our innovative mapping tools."

SeedFieldCheck enables seed companies to register the locations of their field crews daily. Field managers mark registered fields as "planned" or "occupied" to alert pesticide applicators when there will be crews in the area. The information is available in near real-time, allowing seed companies the ability to edit and update plans quickly, replacing the endless circulation of emails and paper or electronic maps to targeted applicators.

The FieldWatch registries include DriftWatch Specialty Crop Site Registry, BeeCheck Apiary Registry, CropCheck Row Crop Registry and FieldCheck. These free mapping tools can be easily integrated into many technology platforms used in agriculture and enable crop producers, beekeepers and pesticide applicators to work together to protect field workers, specialty crops and apiaries. Learn more about SeedFieldCheck at [fieldwatch.com/seedfieldcheckinfo](https://fieldwatch.com/seedfieldcheckinfo).

FieldWatch currently operates registries in 24 states, including Arkansas, California, Colorado, Delaware, Illinois, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, North Carolina, Ohio, Pennsylvania, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin. It also has registries in the District of Columbia and the Canadian province of Saskatchewan.

## Additional Details

- A more detailed flyer explaining how SeedFieldCheck's seed field worker notification system works is available [here](#).
- Aerial applicators must have a free applicator account with FieldWatch to see field locations. To create an account, visit [driftwatch.org/signup#applicator](https://driftwatch.org/signup#applicator).
- For more information about FieldWatch or its online registries, DriftWatch, BeeCheck, CropCheck, FieldCheck and SeedFieldCheck, visit [fieldwatch.com](https://fieldwatch.com).

## 2023 NAAA Award Nominations Due Sept. 8

*Use NAAA's online awards form to submit a 2023 Award nomination!*

***Nine recipients received NAAA Awards in 2022. Who will be among this year's awardees? Nominations are due by Sept. 8.***

**Do you have a rising pilot within your ranks? Do you admire certain NAAA members for their outstanding service to the industry or their community?** The aerial application industry is filled with exceptional people who go above and beyond the call of duty, often with little fanfare. Make someone's day or year by nominating them for a 2023 NAAA Award.

NAAA's online submission form is the fastest and simplest way to nominate someone in just a few clicks, but a printable PDF version of the awards nomination form is also available. The following submission methods are available at [AgAviation.org/awards](https://AgAviation.org/awards).

- **2023 NAAA Awards Nomination Online Submission Form** (recommended)
- **2023 Award Nomination Form** (print version)



Completed entries using the PDF form may be emailed or faxed to NAAA at [information@agaviation.org](mailto:information@agaviation.org) or (202) 546-5726 (fax).

There are nine NAAA Award categories and one NAAREF Award. The nomination deadline is Sept. 8, but early nominations are encouraged. The longer you wait, the busier you'll get this summer.

## NAAA Award Categories

**Agrinaut Award:** Honors an agricultural aircraft operator, operating organization or allied member company that has made an outstanding contribution in the field of ag aircraft operations. The achievement cited shall have contributed to the "state-of-the-art" for the benefit of the agricultural aircraft industry as a whole.

**Allied Industry Individual Award:** Recognizes an NAAA member or staff and/or an allied industry individual who has significantly contributed their efforts for the benefit of the allied industry and the aerial application industry. *(Presented by the NAAA Allied Industry Committee.)*

**Delta Air Lines "Puffer" Award:** Recognizes an individual who has made an outstanding contribution to the design of agricultural aircraft and/or related equipment.

**Evans-Christopher Operation S.A.F.E. Award:** Recognizes individuals or entities that have made outstanding contributions to the Operation S.A.F.E. program. *(Presented by NAAREF.)*

**John Robert Horne Memorial Award:** Honors a pilot with five or fewer years of experience in the agricultural aviation industry who has an exemplary safety record and has contributed to safety in ag aviation. ***This award no longer has carryover nominations from year to year; a new nomination must be submitted every year.***

**Larsen-Miller Community Service Award:** Recognizes outstanding contributions by a member to his or her community.

**Opal and Bill Binnion Memorial Award:** Acknowledges those who contribute to NAAA in its efforts to educate the public about aerial application.

**Richard "Dick" Reade Memorial Award:** Recognizes outstanding contributions by an allied industry member and their company.

**William O. Marsh Safety Award:** Recognizes significant achievements in safety, safety education or an outstanding operational safety program.

**Zoren and Joan O'Brien Memorial Outstanding Service Award:** Awards outstanding service to the commercial agricultural aviation industry or to its association.

The 2023 NAAA Award recipients will be honored at the Excellence in Ag Aviation Banquet Dec. 7 in Palm Springs, California.

## Turbine Training Funds Available Through Charles Stokes Memorial Turbine Training Scholarship

Two \$3,000 scholarships are available to eligible NAAA Operator and Pilot members for turbine transition training through the newly created Charles Stokes Memorial Turbine Training Scholarship. The new NAAA scholarship program is funded by a generous educational grant from Jim Mills of Turbines Inc., who established the scholarship in memory of Charles Stokes (*pictured at right*). It is administered by NAAA.

The new turbine transition scholarship will be awarded starting this year. Here's what you need to know about the 2023 Charles Stokes Memorial Turbine Training Scholarship.

## Key Details

**Purpose:** The Charles Stokes Memorial Turbine Training Scholarship was created to provide training funds to agricultural pilots with a minimum of 150 hours of ag time for use at a turbine transition course or program. The scholarship must be used for turbine flight training at a qualified flight school or turbine training facility.

**Amount:** The 2023 Charles Stokes Memorial Turbine Training Scholarship Program will award up to two one-year, \$3,000 scholarships to deserving, qualified ag pilots participating in a flight training program focused on turbine transition training. All funds are in U.S. dollars.

**Eligibility:** Applicants must:

- Have a minimum of 150 hours of ag time.
- Be a Pilot, Affiliated Operator or Operator member of NAAA.
- Be sponsored by an NAAA Operator member in the Operator dues category who will write a letter of recommendation on their behalf. *(Operator applicants may not sponsor themselves; another NAAA Operator member would need to sponsor them.)*



**How to Apply:** Applicants must apply using NAAA's online application process. A link to the online application is available at [agaviation.org/turbinescholarship](https://agaviation.org/turbinescholarship).

**Deadline:** Aug. 31, 2023

**Restrictions:**

- Applicants may only apply for one NAAA pilot-training scholarship a year—*either* the Charles Stokes Memorial Turbine Training Scholarship *or* the NAAA “Ag Wings of Tomorrow” Scholarship, *but not both in the same year*.
- NAAA Operator members may only sponsor one Charles Stokes Memorial Turbine Training Scholarship annually. They can sponsor an NAAA “Ag Wings of Tomorrow” Scholarship applicant in the same year, but the applicants can't be the same person applying for both scholarships.

## Go Deeper

Learn more about the application process for the 2023 Charles Stokes Memorial Turbine Training Scholarship at [agaviation.org/turbinescholarship](https://agaviation.org/turbinescholarship).

## NAAA Discusses Manned and Unmanned Ag Aircraft on Business of Agriculture Podcast

NAAA CEO Andrew Moore joined member Bill Reynolds and Taranis's Mike DiPaola as guests on *The Business of Agriculture Podcast* hosted by Damian Mason last month. Reynolds is the president and CEO of Leading Edge Aerial Technologies. DiPaola is the chief commercial officer at Taranis, which uses high-resolution aerial imagery to generate AI-powered crop intelligence. Damian Mason is a farmer, businessman, speaker, author, podcaster and consultant. Damian has appeared on television and radio and can also be found on SiriusXM Radio – Laugh USA. He was NAAA's speaker for its 2020 Ag Aviation Expo Kickoff Breakfast. The panel was assembled to discuss the future of manned and unmanned aircraft in the aerial application sector.

Released May 22, the name of the episode is “Aerial Agriculture—A Bird's Eye View of Drones, Manned Aircraft & Tomorrow.” Throughout the nearly hourlong episode, Mason and his guests covered several topics, including if manned ag pilots are fearful of being replaced by drones, the regulatory environment for UAS operations, advances in the efficacy of manned and unmanned aerial application equipment, the financial aspects of drone spraying, and more.

### Aerial Agriculture – A Bird's Eye View...



Here are selected excerpts, along with timestamps you can skip to in the episode to hear more:

**(9:26) Moore, on whether there is a threat of drones replacing manned ag aircraft:** “I don't think it's a threat. I think that it's complimentary.”

**(11:00) Reynolds, on the aerial application niche that drones fill:** “Just those specialty locations where I'd like to think we've saved some lives already in some of the areas that are using unmanned aircraft. The rates per acre is really the key to this. A lot of the rates in California are 15 gallons per acre, and a drone's only carrying 5 gallons or 10 gallons at the most. So you're just never going to get the job done. So there's no question the manned aircraft must stay; they will probably be here for my lifetime and maybe my kids' lifetimes. But those specialty areas that are dangerous or very difficult to get to, [a drone is] absolutely the perfect solution. Trimming up edges of fields, near power lines—just eliminate that from the manned task and make everything safer. It's just a terrific tool.”

**(19:37) Moore, on the challenges of safely integrating unmanned aircraft into the national airspace:** “You probably have 1 ½ million registered drones out there, 1 to 1 ½ million registered drones with the FAA. And you add another 600,000 manned aircraft—you have to have a safe airspace in which to operate. And one of the things that we've been pushing is to ensure always that an unmanned aircraft must give right of way to a manned aircraft. So whether that's technology—having some sort of sense-and-avoid technology that requires that ... that's fine. We don't need someone to actually visually observe as long as it's certified equipment by the FAA that shows that that sense-and-avoid equipment can actually sense and avoid a manned aircraft. So that's something we're pushing along with our other colleagues in ... the manned aviation space.”

**(28:13) Reynolds, on the need for drones to always give the right of way to manned aircraft, especially when manned and unmanned aircraft operations are occurring in the same low-altitude airspace:** "I can only speak to the agricultural side of this and applications, and integrating these unmanned aircraft into the national airspace is a very high priority, and is the primary focus on every COA that's submitted to the FAA. We are operating down below 80 feet no matter what we do. So we are mixed up with the Air Tractors and Thrushes and helicopters, and we absolutely agree with giving way to the manned aircraft. We have landed numerous times, and we communicate with aerial applicators that we're going to be out in certain areas, and we file NOTAMs. So we cover the rules, and we back-check ourselves, and it has worked out well. We've never had any close incursion of any kind because of that."

**(35:10) Moore, on the evolution and integration of technologies in the aerial application sector:** "I foresee, just like you mentioned the see-and-spray from [John] Deer, that you'll have Mike's technology going out [and] doing the initial reconnaissance and shortly thereafter, all that data is being fed to the broader fields; to our manned aerial applicators; into those tight areas to Bill's drones to make those applications. ... Definitely, before we celebrate the bicentennial of aerial application, that's going to be happening."

**(43:08) Reynolds, on whether buying a drone to conduct spray missions makes sense money-wise:** "If I'm gonna spend money to get more yield, how much do I have to spend, and what yield will I lose or gain? I guess that's always the balance in agriculture. So, the investment into unmanned aircraft to get operational is not that tremendous. Typically contractors or people that are using unmanned aircraft are getting a revenue offset back within the first 12 months."

## Where to Watch or Listen to the Full Podcast Episode

Watch the May 22 episode of *The Business of Agriculture Podcast* in the video above or wherever you get your podcasts. The video version is also on [Acres TV](#), and the audio version of the episode is available on [SoundCloud](#).

## NAAA Urges EPA to Reject Settlement Adding More Redundancy to NPDES Pesticide General Permit

As NAAA [recently reported](#), the EPA is considering a proposed settlement agreement to end a lawsuit brought by the Center for Biological Diversity that alleges the National Pollutant Discharge Elimination System (NPDES) Pesticide General Permit (PGP) reissued by the EPA in 2021 does not comply with the Endangered Species Act (ESA). The proposed settlement requires the EPA to conduct risk assessments for federally threatened and endangered species and their critical habitat for the 2026 PGP update.

In [comments sent to the EPA](#) on the proposed settlement, NAAA recommended the EPA oppose the settlement because it just adds one more layer of redundancy to an already redundant requirement. All of the pesticides that could be applied under the PGP already require a new registration or registration review that includes risk assessments for ESA species and habitats. Adding the requirement to the PGP only slows the process down and offers no additional safety to threatened and endangered species.

The PGP itself is redundant for the exact same reason—all pesticides that can be applied to areas covered under the PGP have already undergone risk assessment to ensure that they do not cause harm to the environment or people when used according to label instructions. NAAA will continue to work toward eliminating this overly burdensome rule.

## Exhibitor Details for the 2023 Ag Aviation Expo: Booth Sales for Aircraft & Large Booth Space Now Open

Join us for the 2023 Ag Aviation Expo in [Palm Springs, California](#), Dec. 4-7. In addition to attending the NAAA Ag Aviation Expo, Palm Springs is full of great restaurants, bars, fun activities, and terrific weather! You can visit the Palm Springs Air Museum, enjoy an off road or BMW driving experience, play golf, visit museums and even gamble at a casino close to the convention center. The area offers many hiking trails and top-notch spas.

**Booth Sales for Aircraft & Large Booth Space Now Open:** If you plan to bring an aircraft, need a 20'x20'+ island booth, a 10'x30'+ inline booth or plan to be a Diamond or Platinum Sponsor, please contact [Lindsay Barber](#) ASAP. To ensure the best placement on the trade show floor, we appreciate knowing about aircraft and large booth spaces by the end of April.

The NAAA Trade Show will take place Dec. 5, 12 p.m.-5:30 p.m. and Dec. 6, 10 a.m.-4 p.m. Review the [NAAA Exhibitor Prospectus](#) and [exhibitor webpage](#) for further details, pricing and dates. The full schedule of events is available [here](#).

## Details for the 2023 Ag Aviation Expo

- **Dates:** Dec. 4-7, 2023
- **Location:** Palm Springs Convention Center and Renaissance (the two facilities are attached)
- **Kickoff Breakfast Speaker:** [Burt Rutan](#), Aerospace Legend
- **Schedule of Events:** See the current, tentative schedule [here](#).
- **Hotel:** [Details here](#).
- **Attendee Registration:** Opens in August.
- **Exhibitor Booth Sales:** Details [here](#) for large booth sales that open in late March and 10'x10' and 10'x20' booth sales that open on July 13. Please email [Lindsay Barber](#) if you would like to secure a large booth space (any booth size 10'x30' or larger).

- **Sponsorship Opportunities:** View the sponsorships opportunities [here](#). We have sponsorships available for all budget sizes. Please email [Lindsay](#) if you would like to secure a sponsorship from last year or be contacted about 2023 opportunities!
- **Auction Donations:** Thank you to Pratt & Whitney Canada for donating a PT6-34AG to this year's NAAA Live Auction. While we are still several months away from the Ag Aviation Expo, we are already [accepting donations](#) for the Live and Silent Auction. The earlier you inform us of your auction donation, the more advertising you will receive on the NAAA website and in NAAA publications. Support the aerial application industry by donating an item today. Email [Lindsay](#) with your donation details.

## Has Your Aircraft Been Pattern Tested Yet? There Are Tools to Help

If you have not attended or scheduled an Operation S.A.F.E. Fly-In for this season yet, the time is becoming short in many parts of the country.

NAAREF recommends having your pattern assessed, at minimum, every other year or when major changes are made. This is vitally important to ensuring your aircraft is ready to make effective applications this season. Accordingly, NAAA has included biennial Operation S.A.F.E. participation as a core component of its **C-PAASS** professional aerial applicator certification.

If you are unable to attend one of these events, as an NAAA member, you have alternative options.

Earlier this year, NAAA [announced the release of DropFlight](#), an iPhone/iPad app that allows extremely fast scanning and analysis of water-sensitive spray cards, all on your Apple mobile devices. This tool, created in part by an aerial applicator, is targeted specifically for aerial applicators to use in assessing spray pattern uniformity, effective swath width and droplet size across the swath.

### Download DropFlight from the App Store

Use NAAA member code: **NAAA23**

Another option for conducting your own spray pattern testing is to use AccuPatt, the same desktop (Windows/MacOS) software that Operation S.A.F.E. analysts use. Originally developed to run the string testing systems you may have seen at a fly-in, AccuPatt has grown to include spray-card-analysis functionality that can be used independently to perform spray-card-only pattern testing. Now, it is being offered to NAAA members for use in their own operation at no cost. A flatbed scanner is required to digitize the spray cards for analysis.

### Download AccuPatt for Windows/MacOS

Consult the [User Manual](#) to get up and running

To further reduce friction in getting your spray pattern testing underway, DropFlight is also offering all the needed [testing gear](#). Available as a [convenient kit](#) or by the piece, DropFlight's card mounting system makes it simple to lay out cards uniformly and in the correct orientation to the wind. This testing gear will work with DropFlight and AccuPatt and is the fastest and most convenient way to acquire all the equipment you need to conduct your own pattern testing.

As always, if you consult with a [NAAREF-recognized Operation S.A.F.E. analyst](#) about your pattern testing data, they can report this to NAAREF as participation in Operation S.A.F.E. NAAA members will receive an official letter of participation and credit toward C-PAASS certification.

## Ag Aviation Expo Sponsorships Available: Boost Your Company's Brand!

Join us for the [2023 Ag Aviation Expo](#) in Palm Springs Dec. 4-7. [Sponsorship sales](#) are open for this year's convention. Branding at the Ag Aviation Expo is a great opportunity to get your message in front of the agricultural aviation industry and reach a targeted and nationwide audience of aerial applicators in North America—an audience responsible for applying 28% of crop protection products to commercial cropland in the U.S.

[Get your company name](#) in front of the expected 1,500-plus operators, ag pilots and other attendees directly related to the agricultural aviation industry through an Ag Aviation Expo sponsorship.

## Six reasons why you should be a sponsor at the 2023 NAAA Ag Aviation Expo:

1. A targeted audience will see your company's name and/or logo.
2. Sponsorship enhances your company's credibility and rapport.
3. You will gain brand awareness and recognition.
4. You will generate new sales and/or leads and potential business partnerships.
5. You can drive attendees to your booth and message through your sponsorship.
6. According to a post-convention survey, 75% of aerial applicators stated that they would be "very likely" to use the products and services of a company that sponsors an event at the Ag Aviation Expo. View [sponsorship opportunities here](#).

**By becoming a sponsor, attendees will:**

- Remember your company, services and products.
- See you as a supporter of the ag aviation industry.
- Recognize your brand.

- See you as a partner and industry visionary.
- Hold you above others in purchasing decisions.

For more information, contact [Lindsay Barber](#) by email or phone at (202) 546-5722.

## Makeup PAASS Programs Now Available for 2021, 2022 and 2023 – Get C-PAASS Certified Today!

The impact of the PAASS Program on reducing the number of agricultural aviation accidents and drift incidents is proven—26% reductions in both categories since the program first hit the stage. In an effort to present the program's life-saving curriculum to those who may have missed it, the National Agricultural Aviation Research and Education Foundation (NAAREF) has leveraged the NAAA Education Center to host recorded webinars of the PAASS Program from 2021, 2022 and 2023.

If you want to be C-PAASS-certified for the 2023 season but missed one of these three PAASS Programs, this is your opportunity to fulfill that requirement and complete your C-PAASS application. If you missed the 2023 PAASS Program, it is now available for credit for \$850. Starting July 1, its fee will increase to \$1,700. The 2021 and 2022 programs are each now available for credit for \$1,700.

NAAA members also have the option to purchase one year of unlimited access to not-for-credit versions of PAASS for \$120. The not-for-credit versions of the 2021 and 2022 programs are available now, and the 2023 program will be available starting July 1. More than just a review for yourself, educate your ground crew or other stakeholders to impress upon them the importance of safety and environmental professionalism in your operation. The \$120 option will not give you official credit for PAASS attendance and will not count toward C-PAASS.

The best way to experience PAASS is a live program at your state/regional agricultural aviation convention. However, situations occur that may prevent this from happening. By offering these online options to make up PAASS, everyone can benefit from the wealth of information presented and help move the needle in preventing ag aviation accidents.

[Click here](#) to view all archived PAASS Programs.

## It's Here! Application Now Open for C-PAASS 2023—Certified-Professional Aerial Applicator Safety Steward

Aerial applicators, now more than ever, operate in an environment of competing interests. An ever-increasing demand for timely and effective applications is challenged by factors such as added regulatory burden, rising insurance costs and stiffer pesticide label language, just to name a few. The agricultural aviation industry is rising to these challenges and, in character, has moved to advance education, rather than regulation, as the path forward.

NAAA and NAAREF have jointly launched the Certified-Professional Aerial Applicator Safety Steward (C-PAASS) program to serve as the industry's flagship certification and as a roadmap for the pursuit of the best educational opportunities currently available. This voluntary program allows those aerial applicators who strive to constantly educate themselves to better their safety and application quality to be recognized for their efforts. Secondly, the certification can signal to customers, regulators and others outside the industry their commitment to professionalism.

C-PAASS certification is offered on an annual basis to individual ag pilots, both operator and non-operator. As the first year for C-PAASS, its requirements are based entirely upon education and professional opportunities already available:

1. Annual **PAASS Attendance for three (3) years**
  - 2020-2021 season, AND
  - 2021-2022 season, AND
  - 2022-2023 season
2. Biennial **Operation SAFE Participation**
  - 2022 season, AND/OR
  - 2023 season
3. Annual **Membership in NAAA**
  - 2023
4. Annual **Membership in a State/Regional agricultural aviation association**
  - 2023

## To submit a 2023 C-PAASS application:

1. Check your eligibility at <https://education.agaviation.org/cpaass>
  - You will need to log in using your NAAA username/password. Contact [information@agaviation.org](mailto:information@agaviation.org) if you need assistance.
2. If eligible, scroll to the bottom of the page and locate the **2023 C-PAASS Application** tile. Hover over it and click the green **Register (Free!)** button.

3. You will be prompted to attest to your completion of each of the requirements and directed to upload documentation of your 2023 membership in a State/Regional agricultural aviation association. NAAA Staff will be automatically notified to review your application once this documentation is submitted.
4. Your application will be reviewed within three (3) business days.
5. If your application is accepted, you will be provided a link to pay the certification fee (currently \$100) and obtain your digital certificate.

This is only the beginning. As NAAA develops its own Learning Management System (LMS), new on-demand courses and content will be incorporated into C-PAASS. A wide variety of topics will eventually be included in the LMS, including those covered in 14 CFR Part 137 knowledge and skills and those on how to properly set up agricultural aircraft to make on-target applications.

**Apply for C-PAASS certification today!** Utilize it to inform regulatory officials and insurance agents and to market to your customers that you have undergone additional training and development to ensure you can provide the highest quality service.

## Important Call for GPS Data to Protect Manned Ag Aircraft from Drones

In 2022, an FAA advisory committee weighted with drone interests from Amazon, Google and other unmanned corporate interests suggested that the agency promulgate rules that drones operating beyond visual line of sight be permitted to:

- Increase their weight to 1,320 pounds
- Not equip with ADS-B identification technology
- Not give the right of way to manned aircraft when operating in rural, low-altitude airspace because they claimed there are no other users of this airspace.

As an ag aviator, you know these requests to be patently unsafe and based on false premises. As such, we call on you to help us collect information on ag aircraft's use of the low-altitude airspace. NAAA is working with and supports Mississippi State University's (MSU) Raspet Flight Research Laboratory and its continuing research on safe operational distances between low-altitude, manned aircraft and drones. The study's objectives are to:

1. Identify Ag Aircraft Operational Trends
2. Develop Ag Aircraft Operational Model
3. Validate Model through Observation/Collection of Empirical Data
4. Inform/Educate UAS Operators
5. Promote Safety in all Low-Altitude Ag Environments

**Your voluntary participation in this study is critical** to achieving these objectives. NAAA encourages you to donate your GPS flight log data to participate in this timely research. Logs from any year(s) are welcome and will be washed of any identifying information prior to use.

Many of you have previously contributed during the first stage of data collection from 2017 to 2020 when NAAA members donated 49,180 flight logs from 20 states. The second stage of the study began in 2021 and seeks to additionally include aircraft make and model info. These details are important, as the airspace modeling will be impacted by aircraft types differently, such as fixed-wing versus helicopter operations.

More GPS flight log data is needed to continue this study. Because of the diverse growing areas and unique geographical challenges experienced by aerial applicators, it is imperative that as many states and regions as possible are represented. This will ultimately help facilitate the safe integration of unmanned aircraft into these different airspaces.

As a reminder, NAAA and Raspet have agreed that all submitted information will remain confidential, and all GPS flight logs will be stripped of any personally identifying information before any research is conducted using the data.

There are several methods available to submit your data:

1. Request a secure upload link for larger uploads OR email directly to Madison Dixon, Research Director.  
**Email:** [mdixon@raspet.msstate.edu](mailto:mdixon@raspet.msstate.edu)
2. Mail a flash drive or other storage device to the address below. (The device will be immediately mailed back once data is received if a return address is provided):

**Address:**

Attn: Madison Dixon  
Raspet Flight Research Lab – Bldg. 2  
114 Airport Rd.  
Starkville, MS 39759

## NAAA Releases Book of the Century! Buy It Today

NAAA has released the book of the century—a century of agricultural aviation, that is.

One hundred years ago, an aerial crop dusting experiment spawned the birth of the agricultural aviation industry. To commemorate agricultural aviation's 100th anniversary, NAAA is pleased to present ***Agriculture's Air Force: 100 Years of Aerial Application***.

*Agriculture's Air Force* provides a new, updated account of aerial application's history, 35 years after Mabry Anderson's masterpiece, *Low & Slow: An Insider's History of Agricultural Aviation*, was published. NAAA's meticulously sourced book is based on a collective history of the agricultural aviation industry based on material from *Agricultural Aviation* magazine, *AgAir Update*, *Low & Slow* and other resources.

Beginning with [Agricultural Aviation's Spring 2021 issue](#), NAAA published excerpts from *Agriculture's Air Force* and continued to do so through the [Fall 2021 issue](#). Those stories are just a small slice of what's in the 268-page hardback edition, however. The complete book contains so much more.

*Agriculture's Air Force* delves into the intersection of agriculture and aviation. It chronicles the agricultural aviation industry's growth from its infancy in 1921 through the boom times after World War II and on to today's modern era of high-tech aerial application.

The finished hardback book has been years in the making but well worth the effort. "This is a significant piece of work covering not just the industry's history, but its essence," NAAA CEO Andrew Moore said. "We are proud of it and believe it will make a lasting contribution to the industry."

The story of agricultural aviation is much like the broader story of aviation: It is mostly punctuated with interesting smaller moments sandwiched between milestone developments. Aerial application is also the story of technological leaps and bounds.

*Agriculture's Air Force* covers five eras spanning more than 10 decades. In addition, it features 34 Spotlight pieces focused on significant individuals, organizations, trends, technologies and topics related to aerial application.

*Agriculture's Air Force: 100 Years of Aerial Application* may well be NAAA's most enduring 100th anniversary initiative. One thing's for sure: It is no textbook. The commemorative book is written from a fresh perspective that is entertaining and enlightening. Readers will come away with a new appreciation for agricultural aviation as a profession and the dedicated individuals who propel it forward.

## **Order Your Copy of Agriculture's Air Force Today!**

*Agriculture's Air Force* retails for \$45, excluding shipping. Order it from [AgAir Update's Online Store](#).