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NAAA eNewsletter

NAAA Leaders Discuss Drone Safety on 'Farm Life Live'

2022 NAAA President Jim Perrin and CEO Andrew Moore discussed drone safety issues last Thursday on *Farm Life Live*, an online program hosted by Farm Life Media President Brannon Deal. Deal invited Moore and Perrin on after receiving the **unmanned aircraft advisory news release** NAAA issued last week.

Moore and Perrin were the show's sole guests and had a terrific conversation with Deal. The full episode is available for viewing **here**.

Here are some excerpts from the episode.

Perrin (03:40): "Just to highlight a couple of the issues, once we're in the air, the drones are almost impossible to see. Add to that that our attention is pretty well focused on a lot of other issues, it's pretty easy for us as pilots to not see it. … So, No. 1, it's hard to see; No. 2, there's a lot going on inside the airplane; and No. 3, Captain Sully can certainly attest to what a small bird can do to a big airplane."

Deal (04:57): "And so many of the drones today are either white or gray, which makes them completely invisible [to a manned aircraft]."

Moore (05:40): "I think that, Brannon, you mentioned that your drone is equipped with ADS-B technology, which allows the drone operator to see manned aircraft or any aircraft—another drone even—that's equipped with ADS-B Out technology. So, we definitely would encourage both our members to equip with ADS-B technology, but also all drone operators."

Moore (06:17): "But first and foremost, and it's the law that they give right of way to the manned aircraft. That they land really when they're operating, because they won't be seen, as Jim just said."

Moore (07:35): "As the numbers of drones increase, and it's used more and more in ag, we just need to make sure that this message is getting out."

Perrin (08:30): "The interesting thing with the drone is that really in agriculture we're seeing it used in two significantly different realms. One is the ag spray drone and the other one is the imaging drones. So obviously two different altitudes, two different risks, and essentially manned aircraft is doing the same. We're ferrying to and from the fields, and then once we get to the field then we drop down to low-level operations. I'm not as concerned from a collision standpoint with the drone that's in the field actually spraying, because it's going to be low and it's going to be a field, and I would certainly think that we wouldn't be tasked with spraying the same field at the same time. … But my primary concern and the issues that we have had have been with the imaging drones operating at 400 feet or maybe even a little bit higher. … Between myself and my competitor, we've had four close calls with the imaging drones."

Moore (12:30): "The other thing that's in our release to emphasize is to get certified. Get certified and be well trained [as an unmanned aircraft operator]. That way you're going to know the rules. … Really we would hope that everybody would do that—to be well-trained. Because the greater the professionalism, the safer you are."

Perrin (15:42): "There is a time and a place, and I don't want to sound like we're anti-drone because I'm certainly not anti-drone. I just feel like there's really four facets that potential drone operators or new drone operators really need to consider. One is the legalities of Part 107, FAA Part 107; if they're spraying, the legalities of Part 137; the state licensing requirements to be a licensed applicator with the aerial subcategory; and the insurance. And then finally I'll just say if all four of those criteria are met and the drone is operated within the law and within the regulation, there's really not much hazard here. Frankly, one of my largest concerns is not seeing the drone operator standing next to the field that I'm treating. I would hate to potentially have a problem with a human exposure situation where somebody might be out there and I don't even see him when I'm working. So that's really one of my primary concerns, but again, if the regulations are followed, I think we can all do this without hurting one another."

As of April 27, the *Farm Life Live* episode featuring Moore and Perrin and had been viewed 2,100 times on Farm Life Media's **Facebook page**. Farm Life Media has more than 200,000 followers on Facebook.

AD Issued on Specific CT Vanes and Blades for PT6A-34, -34B, -34AG, -114 and -114A Turboprop Engines

Last week the FAA issued an awaited airworthiness directive (AD) on Pratt & Whitney Canada Corp. PT6A-34, -34B, -34AG, -114 and -114A model turboprop engines. The AD requires the following actions to be taken within 250 flight hours or 270 days after the effective date of May 27, 2022, whichever occurs first:

- Remove from service any CT vane, part number (P/N) 3029051, 3032151 or 3123001, repaired in accordance with Southwest Turbine Inc. (STI) Repair Specification STI 72-50-254 (STI 72-50-254) and replace with a non-STI 72-50-254 repaired CT vane.
- Remove from service any CMSX-6 CT blade that has been operated on an affected engine with any CT vane repaired in accordance with STI 72-50-254.

The FAA first proposed this AD in August of 2020. To read the complete AD, click **here**. The FAA estimates that this AD affects 907 engines installed on airplanes of U.S. registry. The FAA estimates that 63 engines will need to replace the CT vanes and CT blades. The FAA received comments from 13 commenters. The comments and the FAA's responses may be viewed at the previous link.

The following information is from:
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Compressor Turbine Vane Rings (CTVR) that are affected by the AD: Part numbers 3029051, 3032151 and 3123001 that have been repaired in accordance with repair process STI 72-50-254. ***This is a specific repair process performed by Southwest Turbine Inc. Part number vanes repaired by specific repair STI 72-50-254 are the only ones affected by this AD.***

How to determine if your engine is affected:

Review your engine logbooks. There should be entries for hot section inspections and/or CT vane replacement. One may also have 8130-3 forms from the CTVRs that have been installed. If you find any of the above-mentioned CTVR part numbers that have been repaired in accordance with the referenced repair process, then your engine is affected. In addition, if your engine has CMSX-6 blades (single crystal blades), then the blades will require replacement.

If you know a vane replacement has occurred but the logbook doesn't contain complete data or an 8130-3 to identify the CTVR or how it was repaired, the only way to verify if your CTVR is affected is to split the engine and complete a review of the CTVR. You can also contact your local mechanic who performed your last hot section, as they may have records from their work order.

Keep in mind that when a CTVR is changed, it must be done in accordance with information in the engine maintenance manual. One must replace the CTVR with a like flow class CTVR to avoid having performance issues upon reassembly.

There is no Alternate Means of Compliance (AMOC). The only "fix" is to remove any CTVRs that were repaired to the process mentioned in the AD note by STI and install a compliant CTVR.

FBI Warns Food and Agriculture Sector Partners of Potential Ransomware Attacks

Last week the Federal Bureau of Investigation (FBI) informed food and agriculture sector businesses that **ransomware actors may be more likely to attack agricultural cooperatives** during critical planting and harvest seasons, disrupting operations, causing financial loss and negatively impacting the food supply chain.

The FBI noted ransomware attacks against six grain cooperatives during the fall 2021 harvest and two attacks in early 2022 that could impact the planting season by disrupting the supply of seeds and fertilizer. Cyber actors may perceive cooperatives as lucrative targets with a willingness to pay due to the time-sensitive role they play in agricultural production. Although ransomware attacks against the entire farm-to-table spectrum of the food and agriculture sector occur on a regular basis, the number of cyberattacks against agricultural cooperatives during key seasons is notable, the FBI advisory stated.

Since 2021, multiple agricultural cooperatives have been impacted by a variety of ransomware variants. Initial intrusion vectors included known but unpatched common vulnerabilities and exploits, as well as secondary infections from the exploitation of shared network resources. Production was impacted for some of the targeted entities, resulting in slower processing due to manual operations, while other targeted entities lost access to administrative functions such as websites and email but did not have production impacted.

A significant disruption of grain production could impact the entire food chain since grain is consumed by humans and used for animal feed. In addition, a significant disruption of grain and corn production could impact commodities trading and stocks. An attack that disrupts processing at a protein or dairy facility can quickly result in spoiled products and have cascading effects down to the farm level as animals cannot be processed.

Recommendations

Cyber threat actors will continue to exploit network, system and application vulnerabilities within the food and agriculture sector, the FBI's Cyber Division warns. The bureau recommends implementing the following steps to mitigate the threat and protect against ransomware attacks.

- Regularly back up data and password-protect backup copies offline. Ensure backups of critical data are stored on a separate drive that is not on the same network.
- Implement a recovery plan that includes maintaining and retaining multiple copies of sensitive or proprietary data and servers in a physically separate, segmented, secure location (i.e., hard drive, storage device, the cloud).

- Identify critical functions and develop an operations plan in the event that systems go offline. Think about ways to operate manually if it becomes necessary.
- Install updates/patch operating systems, software, and firmware as soon as they are released.
- Use multifactor authentication where possible.
- Use strong passwords and regularly change passwords to network systems and accounts, implementing the shortest acceptable timeframe for password changes. Avoid reusing passwords for multiple accounts and use strong passphrases where possible.
- Require administrator credentials to install software.
- Install and regularly update antivirus and anti-malware software on all hosts.
- Only use secure networks and avoid using public Wi-Fi networks. Consider installing and using a virtual private network (VPN).
- Consider adding an email banner to messages coming from outside your organization.
- Disable hyperlinks in received emails.
- Focus on cybersecurity awareness and training. Regularly provide users with training on information security principles and techniques as well as overall emerging cybersecurity risks and vulnerabilities (i.e., ransomware and phishing scams).

Please review the cybersecurity information in the **Airfield Watch segment** of the 2018-19 PAASS Program for more cybersecurity tips.

NAAA Comments Against Drone Petition Requesting Exemptions Compromising Airspace Safety

Last week NAAA submitted comments on Airobotics Inc.'s petition seeking relief from specified safety requirements of Federal Aviation Regulations. Airobotics is seeking relief to operate a small Unmanned Aircraft System (UAS) for beyond visual line of sight (BVLOS) inspection operations. Because of the BVLOS request, the operation does not fall under part 107, which prohibits BVLOS.

The petitioner requested relief from airworthiness certification requirements, maintenance requirements and pilot certifications. No adequate mitigating safety equipment or procedures are mentioned in the request for relief. In the description of relief and supporting documents, Airobotics stated that its operations would occur only over private property with permission from the property owner/controller or public property with permission from local authorities. None of these conditions preclude the possibility of other aircraft operating in the National Airspace (NAS), which is not privately owned and is accessible and necessary for agricultural operations. NAAA, in its response to the Airobotics petition, reminded the FAA that short of TFRs, NAS is open to the public.

While it has become routine for UAS operators to request relief from the FARs, NAAA continues to comment against changes that make the airspace less safe for agricultural operations. To view the petition for relief or submit your own comments, click **here**. NAAA's comments are available **here**. Comments are due by May 10.

NAAA Nabs Significant Coverage for News Release Cautioning Unmanned Aircraft Operators Not to Interfere with Low-Altitude Manned Ag Aircraft This Season

With another growing season getting underway at a time when aerial application services are expected to be in high demand, last week, NAAA sent a **news release** to aviation and agricultural media outlets advising unmanned aircraft (UA) operators to be mindful of low-flying manned agricultural aircraft operations. The response was almost immediate.

NAAA's unmanned aircraft advisory received significant pickup from media outlets such as *Farm Journal's* **AgWeb**, **CropLife News**, **AVweb**, ***Vertical Magazine***, ***AirMed&Rescue*** magazine, ***State Aviation Journal***, RFD-TV's ***Market Day Report***, the **Southeast AgNet Radio Network**, **WOWO News/Talk radio**, broadcasting from Fort Wayne, Indiana, **The Mighty 790 KFGO** radio in Fargo, North Dakota, **News Dakota**, **6Park News** in Colorado, and an upcoming episode of "Farm Life Live" on Farm Life Media's social media network. News of NAAA's unmanned aircraft advisory even spread to the Australian website **Farm Table**.

The press release recommends that unmanned aircraft operators:

- **Give the right of way to a manned aircraft. It's the law.**
- **Equip drones with tracking technology, such as ADS-B In, so you will know ADS-B Out-equipped manned aircraft positions.**
- **Get certified and well-trained in operating an unmanned aircraft.**
- **Contact local agricultural aviation operations before flying by consulting AgAviation.org/findapplicator**.
- **Equip UAs with visible strobe lights and high visibility marking.**
- **Land an unmanned aircraft immediately when a low-flying aircraft is nearby.**
- **Carry UA liability insurance.**

The news release also garnered a return invitation for NAAA CEO Andrew Moore to appear on RFD-TV's daily news program. He addressed drone and ag aviator safety issues on RFD-TV's *Market Day Report* on April 19. During the live phone interview, Moore was asked how common encounters between manned ag aircraft and drones are. He also explained some of NAAA's key recommendations to unmanned aircraft operators and why the association is expecting a huge year for aerial applicators this season. Watch the full interview below.

Agricultural aviators treat 127 million acres of cropland in the United States each year and perform a variety of services that help farmers increase productivity and protect their crops.

“With Russia’s invasion of Ukraine restricting a huge portion of the world’s food supply, we cannot afford even a small disruption in the nation’s food supply chain,” Moore said in the **news release**. “Agricultural aviators deliver nutrients, seeds and crop protection products to crops that will become consumers’ food and fiber supply in the U.S. and around the world. Their work cannot be delayed because of an unmanned aircraft not yielding to them, as is required by law. 2021 was a big year for aerial applicators, and we expect demand for aerial application services to be even higher in 2022.”

This is the sixth year NAAA has reached out to the media regarding safe UAV operations heading into the spring growing season.

President Perrin Shines on ‘This Week in AgriBusiness’

Ag broadcaster Max Armstrong’s conversations with NAAA officials at March’s Ag Day on the Mall event in Washington are the gift that keep on giving! A terrific interview with NAAA President Jim Perrin aired on *This Week in AgriBusiness* April 16 in which Perrin discussed the technology, precision and environmental stewardship inherent in the agricultural aviation industry today.

Watch the full interview below (no fast-forwarding required).

The episode of *This Week in AgriBusiness* broadcast April 16 on RFD-TV. Each weekly program airs three times on RFD-TV and once a week on 122 local television stations throughout the country. RFD-TV is available in more than 60 million households nationwide.

To view more photos and videos from Ag Day on the Mall, please visit our **Ag Day on the Mall webpage**.

Storm Cat Could be Looming on the Horizon as a Redesigned Ag-Cat

According to a **report** in *General Aviation News*, Storm Aeronautics is developing a modified Ag-Cat—the “Storm Cat”—that it will produce and sell to compete with today’s agricultural monoplanes. Upgrades to the modified Ag-Cat will include a gross weight increase to 10,000 pounds, a new PT6-140AG engine with nearly 900 horsepower, increased fuel capacity and range, a larger cockpit and a bigger hopper that can carry at least 500 gallons.

Per *General Aviation News*:

> Full scale instrumented structural testing of the wings, fuselage, engine mount, and tail section have already been completed at the Storm Aeronautics facility in David City,

Nebraska, and have shown “measurable new capabilities of the Ag-Cat design,” company officials report.

Following continued modeling and validation of the models, a prototype will be built to start the FAA Supplemental Type Certification (STC) certification testing process. Storm Aeronautics is teaming with Aeronautix, an engineering company that specializes in managing STC certification projects.

The full article is available **here**.

Biofuel Policy Taking Root Ranging from E15 from Corn, Biodiesel from Soybeans and Biofuels from Canola Oil

Last week, the Biden administration announced that it will lift the summertime ban on E15 gasoline to help ease high gas prices. E15 is a mix of regular gasoline and a smaller amount of ethanol, a plant-based fuel typically made from corn in the U.S. The “15” in the name means that it includes 15% ethanol. Even regular gasoline typically has up to a 10% ethanol blend (E10), so E15 is just more biofuel in your gas.

The logic behind Biden’s order is that gas that requires less crude oil—which is very expensive right now—could help ease high gas prices. The Biden administration estimates gas prices will be, on average, about 10 cents cheaper after the Environmental Protection Agency (EPA) waives the E15 ban during the summer months. The Biden administration is replicating a Trump administration move to waive the E15 rule in 2019. The move by Trump’s EPA was later blocked by a panel of federal judges.

E15 is meant to be a cleaner form of gasoline because it includes biofuel—which is considered “carbon neutral”—and burns cleaner than 100% gasoline. Ethanol is essentially alcohol—and because alcohol evaporates more quickly, putting more ethanol into gasoline makes the fuel evaporate more quickly. So when gasoline is blended with ethanol, the resulting fuel becomes more volatile and evaporates more easily. However, the evaporated particles react with sunlight to create more smog, which may cause respiratory issues for some people.

In other biofuel news, Chevron USA and Bunge North America announced a new joint venture to move forward with alternative fuels, such as biodiesel from soybeans. Chevron expects to create the capacity to produce 100,000 barrels per day of renewable diesel and sustainable aviation fuel by 2030. All of the expected biodiesel production, should all of the projects come online in two years, would require domestic soybean production to increase by 98%.

In addition, the EPA is proposing a renewable fuel pathway for canola oil as an advanced biofuel. Based on a greenhouse gas (GHG) lifecycle analysis, the EPA determined that renewable diesel, jet fuel, naphtha, liquefied petroleum gas and heating oil produced from canola oil “reduce GHG emissions by at least 50 percent compared to petroleum.” According to the U.S. Canola Association, “Canola oil-based biofuels are cleaner-burning alternatives to petroleum that can replace or be blended with it. Renewable diesel, for example, is a ‘drop-in’ biofuel that is chemically similar to petroleum so it can be used in existing transportation vehicles at 100 percent replacement without blending.” The comment period on this renewable fuel pathway runs until the middle of next month.

EPA Releases Endangered Species Pesticide Work Plan

Earlier this month the EPA released a comprehensive work plan to mitigate the impact of pesticides on endangered species. The EPA is required by the Endangered Species Act (ESA) to consider the impact a pesticide registered under FIFRA has on endangered species and employ mitigations if necessary to protect species impacted by a pesticide. The EPA has met this ESA requirement for less than 5% of its registration decisions. The EPA’s failure to address ESA concerns for most of its decisions has resulted in numerous lawsuits filed against the EPA. The number of these lawsuits has increased in recent years.

The situation has escalated to the point where EPA now has over 50 pesticide active ingredients that have court-ordered deadlines or are currently in litigation for alleged ESA violations. The workload to meet the demands for these court orders and lawsuits has overwhelmed the EPA’s resources and left it with no ability to meet ESA obligations for other pesticides going through the registration and registration review process. The work plan was developed to allow the EPA to better meet its ESA obligations.

The work plan has four strategies to meet this goal:

1. Prioritize ESA obligations until the EPA can increase its overall capacity to handle ESA duties.
2. Improve approaches to identify and require protections for endangered species, especially those at highest risk from pesticides.
3. Improve efficiency and timeliness of ESA consultation process with other federal agencies.
4. Better engage stakeholders to understand pest control practices and how to implement endangered species protection measures.

When registering or reregistering a pesticide, the EPA follows FIFRA and ESA, as well as the Federal Food, Drug, and Cosmetic Act (FFDCA), the Food Quality Protection Act (FQPA) and Pesticide Registration Improvement Act (PRIA). FIFRA requires the EPA to consider both the risks and the benefits of a pesticide during the registration process. The Endangered Species Act requires the EPA to consult with the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) to evaluate each pesticide’s potential risks to threatened and endangered species and their designated habitat. However, the ESA does not require the FWS and NMFS to consider the benefits the pesticide provides, only the risks to endangered species. The FWS and NMFS do not consider FIFRA, FFDCA, FQPA or PRIA. That means that during the consultation process, only the EPA is considering the benefits a pesticide provides. The EPA is working with agencies that have no agricultural or pest control background or mandate, making the consultation process difficult for the EPA.

The consultation process itself has undergone several iterations in an attempt to improve both its accuracy and efficiency. In 2013, the National Academy of Sciences released a report with its recommendations on how to evaluate the impact pesticides have on endangered species. The suggested approach was first used in 2015 as an interim method to evaluate three pesticides. Based on feedback from the interim method, the EPA, FWS, NMFS and USDA developed a revised method for evaluating the impact a pesticide might have on endangered species. The revised method has been used on five pesticides. The 2018 Farm Bill created an interagency working group consisting of five federal agencies, including the EPA, whose task was to engage with stakeholders and work to further improve the consultation process.

The work plan is the latest development in the ESA consultation process. It follows an announcement in January 2022 from the EPA indicating the agency will meet ESA obligations for all newly registered pesticides.

Proposed AD on GE/Walter 601 Centrifugal Compressor Case

The FAA proposes to adopt a new airworthiness directive (AD) for all GE/Walter M601D-11 model turboprop engines. This proposed AD would require revising the airworthiness limitation section of the existing engine maintenance manual to incorporate a visual inspection of the centrifugal compressor case for cracks every 100 hours. An owner/operator (pilot) holding a least a private pilot certificate may make this revision.

To read the complete proposed AD, click **here**. Comments on this proposed AD are due by May 31. To submit comments, click **here**.

Proposed AD on Bell 204, 205, 210, 212, 214 and Similar Restricted Models

The FAA proposes to adopt a new airworthiness directive (AD) for Bell Textron Inc. Model 204B, 205A, 205A-1, 205B, 210, 212, 412, 412CF and 412EP helicopters and various restricted category helicopters. This proposed AD was prompted by reports of cracks found on the main transmission support case. This proposed AD would require repetitive inspections of the main transmission housing assembly for cracks, pitting and corrosion and corrective action depending on the results.

This proposed AD would require a visual inspection for corrosion and thread damage within 3,000 hours time-in-service (TIS) accumulated by the main transmission after the effective date of this proposed AD. It would also require repetitive fluorescent penetrant inspections of all surfaces of the main transmission support case lateral mounts on helicopters with a main transmission that has accumulated 6,000 or more total hours TIS.

To view the complete proposal, click **here**. Comments are requested to be submitted by May 31. To submit comments, click **here**.

NAAA Broadcasts Ag Aviation's Message to Ag Journalist Max Armstrong on Farm Progress' 'This Week in AgriBusiness'

It was another great week of coverage for NAAA and the agricultural aviation industry the second week of April when NAAA CEO Andrew Moore was interviewed by celebrity ag broadcaster Max Armstrong on Farm Progress' ***This Week in AgriBusiness.*** The interview was recorded last month at **Ag Day on the Mall**, where NAAA exhibited and spoke to a multitude of policymakers, regulators, media members and everyday citizens who stopped to check out the Bell 206 LongRanger helicopter on display halfway between the U.S. Capitol and the Washington Monument.

Armstrong's interview with Moore can be found **here** beginning at minute 24:00 and concluding at minute 28:48. In the piece Armstrong asks about misconceptions the public has about the industry and Moore discussed the array of technologies the typical ag aircraft is equipped with—from GPS to onboard meteorological technology and imaging—that allows precise applications in prescribed doses. Moore also discussed how ag aviators' speed and ability to treat when soil is wet, parking terrestrial vehicles, allows it to protect pest infestations quickly before they are out of control and leave the crop undamaged due to treating above the canopy and not within the crop resulting in greater yields. He also stated that in addition to the 127 million acres aircraft treat of the total 347 million acres of U.S. cropland (not including forestry, pastureland and rangeland) aerial applicators apply 3.8 million cover crop acres that sequester 1.8 million metric tons of carbon dioxide each year. Moore also mentioned that ag aircraft are used for firefighting and for public health applications to eradicate deadly, disease-carrying insects, such as mosquitoes.

The episode of *This Week in AgriBusiness* was broadcast April 9 on RFD-TV. Each weekly program airs three times on RFD-TV and is viewed on 122 local television stations throughout the country. RFD-TV is available in more than 60 million households nationwide.

Raise Awareness about Ag Aviation Activities in Your Area with NAAA's Customizable 'Preseason' Press Release, Available to Members Only

With the 2022 aerial application season underway or soon to be underway in different parts of the country, NAAA has prepared a customizable, **do-it-yourself press release** that members can use to call attention to the fact that ag aircraft will soon be a common sight as ag pilots assist local farmers during the new growing season.

The press release emphasizes the vital role aerial applicators play in the production of abundant food, fiber and bioenergy, especially now amid the Russian invasion of Ukraine and its potential effect on reducing global food supply. The release also details the training,

professionalism and safety of aerial applicators by highlighting the drift-reduction technologies they employ, recurrent training they receive and credentials they must maintain to work as a professional ag pilot.

NAAA encourages members to adapt the **generic "preseason" press release** for their own use and distribute it to the public via traditional and social media outlets. Just fill in the blanks, add your own comments and either insert your company logo at the top or print it on company letterhead. Rename the file, save it to your computer, and send it to your local media outlets via mail, email or through their website.

The minor outlay of time and effort is worth it. Some extra attention and publicity up front could avoid misunderstandings down the road once the season enters full swing. The press release template is available for download **here**.

Besides the **preseason ag aviation awareness press release template**, the following do-it-yourself press release templates may be adapted to suit member applicators' specific needs. Log into your NAAA account to access them:

- **Importance of Aerial Application DIY Press Release**
- **Environmental Safety DIY Press Release**
- **Towers and Obstructions DIY Press Release**
- **Ag Aviation Security DIY Press Release**
- **Drone Safety DIY Press Release**

Each press release template has been updated to include the latest industry facts and figures using data gleaned from the FAA, USDA and NAAA, including the 2019 NAAA Aerial Application Industry Survey.

These PR resources and more are available in the **NAAA Media Relations Kit** on our website.

NAAA Saves Rotenone Piscicide from Aerial Extinction

In May 2021 NAAA commented on the proposed interim decision for rotenone, a piscicide used to eradicate invasive fish. The EPA proposed banning aerial application of the pesticide because of risks to bystanders and birds. While it is rarely applied by aerial application, the USDA Office of Pest Management Policy indicated to NAAA that state and federal wildlife management agencies do utilize aerial application of rotenone in areas that are difficult to reach with other forms of application. Aerial application is also occasionally used by fish farms.

NAAA objected to the proposed ban and suggested some drift mitigations, including an extremely coarse droplet size, maximum boom length set at 65% of wingspan for fixed-wing aircraft and a maximum of 75% of rotor diameter for helicopters for all wind speeds up to 15 mph, and a ¾ swath displacement. NAAA ran the Tier 3 AgDRIFT model with these parameters to show the EPA this setup reduced drift by 98% compared to the faulty Tier 1 model the agency used to assess the risk of drift from aerial applications of rotenone.

The efforts were successful—the final interim decision maintained aerial application. The EPA acknowledged that while rare, the ability to make aerial applications of rotenone is critical in certain situations. The label restrictions for rotenone will include a statement that allows aerial applications when other options are not feasible. Additional restrictions include a wind speed restriction of 10 mph, ½ swath displacement from downwind edge, avoiding inversions, maximum spray height of 10 feet, coarse or larger droplet size, and a quarter-mile buffer zone around people and dwellings.

NAAA is pleased the EPA acknowledged the importance of aerial applications and that risks can be mitigated.

NAAA Comments on Central Plains Agronomy's Drone Petition for Relief from FAA Safety Requirements

NAAA recently submitted comments on a petition for relief from Central Plains Agronomy (CPA) to specific safety requirements within Federal Aviation Regulations (FARs) 14 CFR § 61, 91 and 137 to perform agricultural operations, including commercial applications with drones up to 100.75 pounds. Since the CPA drones are heavier than 55 pounds, they do not operate under FAR part 107—regulations for commercial drones under that weight—and are required to request relief from the FAA to be exempt from certain parts of the FARs to operate.

NAAA's comments opposed the CPA's requests for exemptions dealing with airworthiness, safe altitudes, fuel requirements and maintenance and reiterated that the requirements for heavy drones outside of FAR Part 107 should be identical to those of manned aircraft. NAAA also commented on unsubstantiated and inaccurate claims made in a document prepared for CPA by UASolutions Group LLC as to the purported advantages of unmanned applications over manned applications. As one of the risk mitigations that CPA is promoting is that the operations will occur *"under controlled conditions in predetermined airspace that is, 1) Limited in scope 2) Controlled as to access by mission essential personnel only."* NAAA reminded the FAA that the national airspace (NAS) is not private, and access is not controlled by private entities. Short of temporary flight restrictions (TFR), the NAS is accessible to aircraft such as manned agricultural aircraft to do their jobs properly. Other claims made and NAAA's response are:

Central Plains Agronomy's claim that their drones *"reduced exposure to chemicals for applicators"* was met with the NAAA response that there is a far greater likelihood due to the small hopper size and exponentially more times a worker will have to refill a small drone that it will result in greater exposure to chemicals for those workers. The drone will most likely be refilled at a temporary site in or near the field, where the lack of closed-contained facilities will make decontamination difficult.

Central Plains Agronomy's claim that their drones' *"reduction in chemical drift compared to manned aircraft application and reduced exposure of surrounding beneficial vegetation"* was met with the NAAA response that the claims were completely unproven and that drift from drones has not been adequately studied. Further, there are many factors that indicate drift from a drone will be equal to or greater than from manned aircraft. Drones are light and do not have the weight necessary to bring the product down to the crop canopy. The multi-rotor design appears to send the spray in many different directions, and to get a decent spray pattern requires drones to apply at about 10 to 12 feet above the crop canopy, which is the same height as manned aircraft.

Central Plains Agronomy's claim that their drones result in a *"more environmentally friendly application with reduced noise"* was met with the NAAA response that while the decibels may be lower, the time spent in the area will be substantially longer due to a drone's low productivity, causing the acoustic imprint to remain. One of the most promising developing uses for drones is hazing (harassing) blackbirds in sunflower fields to prevent depredation. Such a use would require constant activity in the blackbird invaded area with the constant audible whining of the drone. Unlike the [CPA] claims made, drones are not environmentally benign either audibly, to the physical land or to human exposure.

Central Plains Agronomy's claim that their drones result in a more *"selective use of chemicals for a safer more targeted application, and better value for the customer"* was met with the NAAA response that there is no difference in the selectivity in the use of chemicals between unmanned and manned aircraft. The operators of manned aircraft are constantly looking for the best value for the customer. Manned aircraft can and do perform variable rate and selective applications when it is of value to the customer.

View the **request for relief**, **submit your own comments** or view NAAA's comments **here**. Comments are due by April 21.

While the requests for relief have become routine, NAAA continues to comment against parts of the requests it believes make the airspace less safe for manned aircraft and the general public.

Proposed AD Affecting Propeller Shafts on GE/Walter 601 Engines

The FAA proposes to adopt a new airworthiness directive (AD) for certain GE/Walter M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S and M601F model turboprop engines. This proposed AD was prompted by the absence of life limits for propeller shaft part number (P/N) M601-6081.6 in the airworthiness limitation section of the applicable M601 Engine Shop Manual.

For M601D-11, M601E-11, M601E-11A, M601E-11AS and M601E-11S model turboprop engines, this proposed AD would require calculating the accumulated life of the propeller shaft and, depending on the number of accumulated flight hours, removal and replacement of the propeller shaft with a part eligible for installation. GE Aviation Czech Alert Service Bulletins listed in the proposed AD specify procedures for calculating the accumulated life of propeller shafts.

The FAA estimates that there are 14 engines in the U.S. that may be affected and require the replacement of the propeller shaft. To read the proposed AD or to comment, click **here**.

Exhibitor Details for the 2022 Ag Aviation Expo: Booth Sales for Aircraft & Large Booth Space Now Open

Join us for the 2022 Ag Aviation Expo in the **new location** of Knoxville, Tennessee, Dec. 5–8. NAAA Expo attendees and exhibitors will take over several hotels and the convention center in thriving downtown Knoxville, which is full of restaurants featuring great southern cuisine, fun bars and unique shops. Knoxville is also a short drive to the Great Smoky Mountains, which offer excellent **pre and post**-Ag Aviation Expo trip ideas.

Because Knoxville is a day's drive for more than half of the U.S., we're expecting a large crowd at this year's Ag Aviation Expo. Exhibiting allows you to get your company, product/service and brand in front of an expected 1,500 attendees. We hope to see you and your company in Knoxville!

The NAAA Trade Show will take place Dec. 6, 12 p.m.–5:30 p.m. and Dec. 7, 10 a.m.–4 p.m. Review the **NAAA Exhibitor Prospectus** and **exhibitor webpage** for further details, pricing and dates. Click here for a full **schedule of events**.

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.

Details for the 2022 Ag Aviation Expo

- **Dates:** Dec. 5-8, 2022
- **Location:** Knoxville Convention Center
- **Kickoff Breakfast Speaker:** **Captain Scott Kelly**, first astronaut to complete year-in-space mission.
- **General Session Speakers:** **Dr. Stan Musick & Michelle Miller**
- **Schedule of Events:** See the current, tentative schedule **here**.
- **Hotel:** Details **here**.
- **Attendee Registration:** Opens July 1.

- **Exhibitor Booth Sales:** Large booth sales open. 10'x10' and 10'x20' booth sales open on July 14. Please **email Lindsay Barber** if you would like to secure a large booth space.
- **Sponsorship Opportunities:** Sponsorships are now available. View the **opportunities online**. Please **email Lindsay** if you would like to secure a sponsorship from last year or would like to be contacted about 2022 opportunities! We have sponsorships available for all budget sizes.
- **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.

NAAA Ag Aviation Expo Hotel Room Block Open

Join us for the 2022 Ag Aviation Expo in Knoxville, Tennessee, Dec. 5-8. The Ag Aviation Expo will provide you with networking, education and fun in a wonderful city full of restaurants, nightlife, shopping and attractions. The NAAA hotel room block is now open! It is important for attendees to stay in the NAAA room block. We get the best hotel room rates for our attendees, and if the NAAA hotel block is not filled, we cannot offer great rates for future years.

We have five hotels at different price points and in different sections of the city. View a list of the hotel and maps below or online **here**. Use the information below to book your hotel rooms and after you book your hotel room, learn more about Knoxville **here**.

NAAA Knoxville Hotel Choices

1. Marriott Knoxville: $139/night + taxes. Click here to book a room.
- A brand-new hotel across the street from the Knoxville Convention Center.
- 525 Henley Street, Knoxville, TN. Local Phone: 865-522-2800; Toll-Free: 888-236-2427 (Code: National Agricultural Aviation Association)

2. The Tennessean: $219/night for King or $229 for Queen/Queen + taxes. Click here to book a room (in the Add Code box: NAAA and leave as Group Attendee, click Add in Group Attendee box)
- A luxury boutique hotel across the street from the Knoxville Convention Center.
- 531 Henley Street, Knoxville, TN. Local phone: 865-232-1800

3. Hilton: $159/night + taxes. Click here to book a room.
- One-block walk to the Knoxville Convention Center.
- 501 West Church Avenue, Knoxville, TN. Phone: 888-225-9664 (Group Code AV22)

4. Crowne Plaza: $149/night + taxes. Click here to book a room.
- Five-block walk to the Knoxville Convention Center.
- 401 W. Summit Hill Drive, Knoxville, TN. Toll-Free: 877 424-2449. Local Phone: 865 522-2600 (Group code NAA)

5. Hyatt Place, $159/night + taxes. Click here to book a room.
- Sleeping rooms available Dec. 4-8 only
- Four-block walk to the Knoxville Convention Center and located on Gay Street, a historic street with many restaurants and bars.
- 530 S. Gay Street, Knoxville, TN. Local Phone: 865-544-9977 (Group code G-NAAA)

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- **Schedule of Events:** See the current, tentative schedule **here**.
- **Hotel:** Details **here**.
- **Attendee Registration:** Opens July 1.
- **Exhibitor Booth Sales:** Large booth sales open in late March. 10'x10' and 10'x20' booth sales open on July 14. Please **email Lindsay Barber** if you would like to secure a large booth space.
- **Sponsorship Opportunities:** Sponsorships are now available. View the **opportunities online**. Please **email Lindsay** if you would like to secure a sponsorship from last year or would like to be contacted about 2022 opportunities! We have sponsorships available for all budget sizes.
- **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.

We All Have a Telling History: Use Yours and NAAA's Materials to Broadly Communicate Agricultural Aviation's

By Andrew Moore, NAAA CEO
If you are an active citizen in the world of aerial application, don't be a static audience member during this epic centennial event. Take the stage with us and bring out your inner thespian as we enunciate the gospel of agricultural aviation to the public.

History is not just documenting famous or infamous people, times and events. We all have a history—a story to tell about ourselves that can contribute to the next and future generations' betterment. One could also believe that sharing our history is one of the meanings of life—to improve and evolve our world by sharing the key to living a good life and sharing the hazards and obstacles that may hinder such living.

NAAA has reached the climax in the centennial epic of sharing our industry's history to the public, which of course was Aug. 3, 2021. But just because the official centennial anniversary date is behind us doesn't mean all efforts to share the importance of our industry to the public have passed you by. We will be celebrating the centennial of agricultural aviation for an entire year. We continue to reach out to policymakers, our brethren in the fields of agriculture and aviation, to the trade press, to the public and to the national news media. We continue to share our history of improving the cultivation of food, fiber and bioenergy consumed globally and how we've learned from harrowing experiences and evolved technologically to fine-tune our craft, use less product to cover more acres and better care for Mother Earth. We are continuing to use all types of media to educate the public—three different length video documentaries, a comprehensive book of our history, social, print, trade and news media releases and a special website, **AgAviation100.com**, to share the 10-decade story of ag aviation and we will continue to due so through July of 2022.

If you are an active citizen in the world of aerial application—whether an operator, pilot, crew member, service-parts-equipment provider or related tangentially to the industry in another way—don't be a static audience member during this epic, year-long centennial event. Take the stage with us as we enunciate the gospel of agricultural aviation to the public. Inform your local television stations, newspapers and radio stations about the industry's 100th anniversary, even if it is by simply directing them to **AgAviation100.com**. On that site, there is a "**Get Involved**" tab with a draft press release about the 100th that discusses the importance of the industry, its progressive evolution, and directs readers to **AgAviation100.com** to learn more. Feel free to cater that press release to your own operation and experience and send it to your local news outlets.

You can also brush up on the ag aviation script about the importance of ag aviation, environmental safeguards that are common practice today and other industry talking points on NAAA's media relations kit webpage that may be found **here**.

The media relations kit also includes suggestions on how to best communicate to the media and public when espousing ag aviation's significance. If you don't feel comfortable communicating directly, no worries. NAAA staff and an assortment of ag aviation ambassadors can be used as understudies and take over that role, but do make sure the public and news media in your area are informed of our centennial milestone to maximize the value of this pivotal once-in-a-lifetime event.

Don't forget, we all have a great story to tell about this industry. Whether it is how one got into the industry; the training to fine-tune ag aircraft and the application equipment; how ag aviation provides to local employment and the local economy; or how after five generations, our technology and experience are such that we produce more per acre, showing that our care for the environment continues to progress—all of these anecdotes are both important and fascinating to public audiences.

It's up to us all to tell the story to continue this industry's remarkable legacy. And again, just because the official anniversary date has occurred, our centennial lasts a year and you can still contribute plenty. Please join the ag aviation cast for this once-in-a-100-year performance that is leading to glowing public reviews and will continue to do so throughout the year.

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 has been publishing excerpts from *Agriculture's Air Force* and will continue 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**.