



AVIATION SAFETY
FISCAL YEAR IN REVIEW

2021





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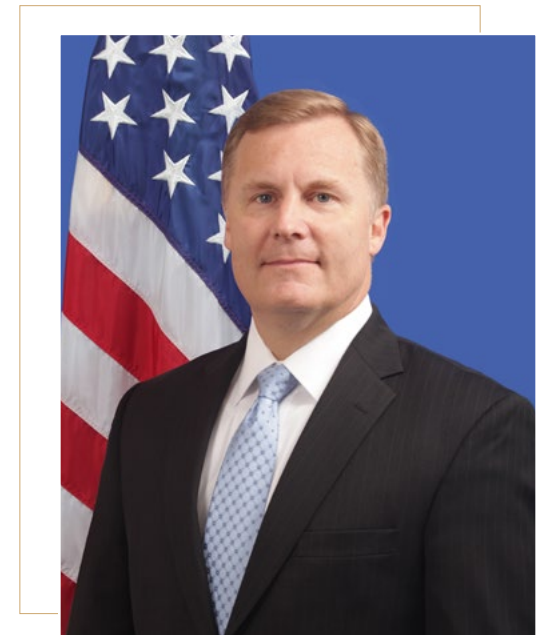


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A Message from the Acting Associate Administrator for Aviation Safety



Dear Colleagues:

In this year of dramatic change in the aviation environment, the FAA's Aviation Safety organization worked with tremendous dedication to sustain safe operations in the National Airspace System. We promoted new technologies, processes, and approaches to enhance safety in the long term.

These tireless efforts helped to advance our mission of providing the safest, most efficient aerospace system in the world. Our use of a data-driven, risk-based systems approach for standards, certification, and oversight is driving progress in reducing commercial and general aviation accident rates.

This year, we led the Agency's critical work on the implementation of the Aircraft Certification, Safety, and Accountability Act, while addressing recommendations from investigations and independent reviews related to the 737 MAX. Our work to fully implement the Act continues, and we are carrying it out with the focus and urgency it requires. [For more on AVS's implementation of the Act, please see page 5.]

Furthermore, we continued to be innovative in how we conduct our safety work while keeping our workforce and the traveling public healthy. We're proud of our role in swiftly issuing guidance to industry for aircrew operating in the aviation system and in the distribution of millions of COVID-19 vaccines.

The Aviation Safety team was active on a number of fronts as technology continues to develop rapidly. We began a new research and testing program for drone integration, focusing on beyond visual line of site operations. We issued a final rule for Special Flight Operations for Supersonic Aircraft. And in a year of history-making commercial space launches with civilian passengers, we issued a final rule for Streamlined Launch and Reentry activities.

This report highlights the men and women who made these safety accomplishments possible. In reading our report, I hope you share my admiration and appreciation for the 7,400 professionals who comprise the world's best aviation safety team.

Chris Rocheleau



2021 Aviation Statistics

As of September 30, 2021

Registered Aircraft: 1,150,203

Recreational UAS – 520,486

Part 107 Small UAS – 341,581

Other Aircraft – 288,136

Flight Instructors – 120,592

Approved Manufacturers – 1,465

Mechanics with Inspector Authority – 34,067

Active Pilots: 1,007,228

Remote Pilots Certificated – 246,211

Other Active Pilots – 761,017

Designees: 8,357

Aircraft Certification Designees – 2,385

Flight Standards Designees – 3,578

Aerospace Medicine Designees – 2,394

Air Operator Certificates – 4,912

Air Agency Certificates – 6,412

Airmen Medical Examinations – 373,880

Air Traffic Specialist Credentials – 16,182

2021: Implementing Certification & Safety Oversight Reform



AVS understands and embraces the need to promote and sustain the primacy of safety, as well as continuous and proactive management of risk throughout its workforce, across industry, and with other aviation authorities.

To meet this need, we are driving greater transparency, collaboration, and accountability across the regulating and regulated communities, with a primary focus on:

- Strengthening corporate safety cultures to improve safety risk management and performance through mandated and voluntary action;
- Improving data availability, accessibility, and analysis through both process and infrastructure enhancements; and
- Advancing system-level safety management through better integration of the design, production, and operational approval processes.

We are committed to thorough and complete implementation of the Aircraft Certification, Safety, and Accountability Act (ACSAA) and addressing recommendations from recent investigations and independent reviews. In our work, we identified the following themes, which are at the core of our efforts:

- Treat aircraft as complex systems, with full consideration of how all the elements in the operating system interact;
- Integrate human factors considerations more effectively throughout all aspects of the design and certification process;
- Improve the agency's oversight process by ensuring coordinated and flexible flow of data and information; and
- Focus on the workforce of the future and develop expertise to evaluate technological advances.

With dozens of recommendations and over 100 unique legislative requirements, our work is still in the early stages, but we are carrying it out with the urgency it requires. In this past year, we have achieved a number of notable accomplishments, including implementation of a voluntary safety reporting program, finalizing the charter for the Changed Product Rule International Authority Working Group, and issuing policy to require FAA approval of Organization Designation Authorization (ODA) Unit Members for certain ODA holders.

We will continue our work to diligently implement all provisions and recommendations while also continue to improve and refine our certification and safety oversight processes using a comprehensive approach.

Advancing Bilateral and Multilateral Safety Engagements

By Daniel Chong, Acting Director, AVS International



The AVS Strategic Plan and the FAA's new Flight Plan 21 underscore the importance of active participation in international aviation. The dedication of AVS leadership, the AVS International Coordination Team (ICT), and experts across AVS advanced international AVS milestones.

In FY21, the AVS International group (AVS-5) and the ICT collaborated to develop improvements to realize an integrated approach to engagement with other FAA organizations and external entities. This collaboration produced results such as:

- Championing AVS innovation and creativity through the compilation and incorporation of new and innovative AVS-wide approaches into international outreach materials;
- Enhancing data collection, prioritization, and analysis through the collaborative AVS international engagement plan;
- Progressing new, standardized guidance for AVS personnel; and
- Establishing a comprehensive international AVS workforce-training development plan.

These accomplishments are integral to connecting AVS interests and expertise to international forums by clearly articulating a coordinated message for the right people in the right places at the right time.



“COVID-19 did not negatively impact our ability to progress integrating AVS international engagements, or to achieve priority outcomes.”

Our collaboration with the ICT also advanced bilateral and multilateral AVS aviation safety engagements. Highlights of these accomplishments include:

- Leading U.S. preparations for safety-related topics at the International Civil Aviation Organization (ICAO) High-level Conference on COVID-19;
- Drafting the first U.S. National Aviation Safety Plan as part of meeting goals and targets in the ICAO Global Aviation Safety Plan;
- Providing expertise and leadership to ICAO Panels responsible for crafting international standards in priority safety areas;
- Expanding safety cooperation with international partners to include outreach to promote effective implementation of safety agreements as well as signing revisions to our agreements with the European Union, United

Kingdom, Canada, and Republic of Korea; and

- Increasing our use of virtual platforms to continue outreach, information sharing, and collaboration with the international aviation community through virtual training webinars, joint videos, and other events.

Although the COVID-19 public health emergency continued to affect how AVS conducted international work, it did not negatively impact our ability to progress integrating AVS international engagements nor to achieve priority outcomes. Our accomplishments in FY21 demonstrated that—no matter how the aviation landscape may evolve—AVS will continue to seek out opportunities to enhance our effectiveness and strengthen the safety of the global aviation system.



A Year in the Life of Rebecca Barthel

Foreign Affairs Specialist, AVS International

 [Click to view the video interview](#)

What do you do for AVS?

I focus on helping AVS engage with other actors in the international aviation community. Aviation connects the world, which means that AVS needs to connect with other regulators in order to be effective. Our responsibilities are bigger than just the U.S. NAS! In AVS-5, my goal is to help provide the Services and Offices and AVS leadership what they need to help them achieve all of AVS's external, international objectives. I work primarily with other AVS Foreign Affairs Specialists, as well as other FAA organizations and U.S. government agencies.

Can you describe a tough challenge you faced in 2021?

I have been helping an AVS-5 colleague lead the AVS preparation for a major international meeting – an International Civil Aviation Organization (ICAO) conference attended by all 193 member countries or states.

ICAO will hold this meeting completely virtually,

which, given the scale, will be a new experience for everyone involved. In a remote environment, figuring out how to efficiently and effectively do everything we need to do—like reviewing all of the papers submitted to the conference containing proposals for ICAO's work and agreeing across AVS, the FAA, and the U.S. government about how to respond to these, has been a challenge. We are using ALL of the virtual tools available—email, Teams, Zoom, SharePoint, Huddle—to help us coordinate and work collaboratively on documents.

What was your most satisfying experience this year?

Despite all of the changes in our working environment brought by COVID-19, our AVS-5 team met all of our objectives for the year, including bringing on new team members. I appreciate tremendously the relationships with colleagues across AVS, the FAA, and the U.S. Government, many of whom I have known for my entire FAA career, who helped make this happen! I also greatly value the opportunity



“We are using ALL of the virtual tools available – email, Teams, Zoom, SharePoint, Huddle – to help us coordinate and work collaboratively on documents.”

to help others in the FAA learn about our interesting and important work.

Tell us something a stakeholder would not know about your work?

People hear my job title and immediately think I must do a lot of traveling. That's not necessarily the case—especially in AVS-5, where our focus is more internal to AVS! My job actually involves a lot of reading and writing. While we might travel occasionally, such as to attend an ICAO meeting, it is in service of a larger objective and not a function in itself. There are usually weeks or months of preparation preceding every trip, which may be surprising to hear.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

We are focusing on ways to increase our ability to gather and analyze data and information to help AVS highlight priorities and decide corporately

how to use resources in the most impactful way. In the long run, we hope this will make AVS even more effective in improving aviation safety globally.

Harnessing the Power of Data in Medical Research

By Susan Northrup, M.D., Executive Director, Office of Aerospace Medicine



guidance for the safe air transport and distribution of COVID-19 vaccinations cooled by dry ice, and help develop agency policy on resuming in-person research.

In FY21, AAM also:

- Formed the Aerospace Medicine Working Group to address common issues among transportation agency medical groups, including: NASA, Coast Guard, FHSA, National Transportation Safety Board, and the DoD.
- Convened the Aeromedical Certification Summit in November 2020, with participation for the first time with external stakeholders from AOPA, EAA, SWAPA, and ALPA.
- Continued development of the Aerospace Medicine Safety Information System focused on technical design replacement of the legacy DIWS system for certification.
- Improved preparedness capabilities in order to flesh out our future public health capabilities, capturing lessons learned from the COVID-19 pandemic.

One AAM initiative highlighting AVS's Strategic Plan goal of harnessing "the power of data and predictive analytics to identify and manage emerging risks" is found in our new 5-year strategic R&D plan. In this period, we aim to implement the Medical Specialties Division (AAM-200) vision for Evidence-Based Risk Assessment (EBRA) for medical certification.

Throughout 2021, efforts to keep travelers, flight crews, and AVS employees safe from the global pandemic presented enormous challenges to AVS's Office of Aerospace Medicine (AAM). Fortunately, our team rose to the occasion and was even able to move the ball forward on a number of AAM initiatives.

As efforts to combat the pandemic intensified, AAM professionals worked tirelessly to vaccinate FAA employees, provide continuing training, and education for Aerospace Medical Examiner designees, coordinate the distribution of PPE throughout several FAA facilities, collaborate with the Aircraft Certification service on



"Through EBRA, we hope to establish a new, computationally based approach to medical certification and aeromedical risk management."

This year, multiple AAM divisions collaborated with the University of Birmingham (UK), the Bristol-Myers Squibb Company, and Pfizer to use existing, large, commercially available healthcare claims data sets to develop risk estimates for incapacitating events in individuals with a common heart disorder known as atrial fibrillation. The analyses provided quantitative risk estimates previously unavailable to the FAA using internally available data, affirming EBRA's potential.

Looking forward, our Aerospace Medical Research Division (AAM-600) will follow up on this pilot work, validate the concept, and explore needed data analytics to include artificial intelligence and machine learning applications. AAM-600 will procure a large, commercially available healthcare claims dataset and an Electronic Healthcare Record dataset from

IBM Watson Health as well as leverage MITRE's Synthea application to create synthetic patient datasets. Additionally, AAM-600 is exploring data management architectures to leverage its internal, high-performance computer resources and the FAA's Enterprise Information Management platform. It has also been establishing collaborative research relationships within academia and industry to develop the needed data analytics to operationalize.

Through EBRA, we hope to establish a new, computationally-based approach to medical certification and aeromedical risk management, demonstrating our continued focus on enhancing aviation safety through innovation in aerospace medicine.



A Year in the Life of Kris Belland

DO/MPH, Regional Deputy Flight Surgeon, Office of Aerospace Medicine

[▶ Click to view the video interview](#)



What do you do for AVS?

I serve as the FAA Southwest Region Deputy Flight Surgeon. I started at the FAA in August, 2020.

Can you describe a tough challenge you faced in 2021?

The toughest challenge our Aeromedical team faced during 2021 was ensuring NAS safety at the 152 regional facilities by conducting COVID-19 pandemic support, through both contact tracing and medically advising management. This was on top of our primary responsibility of ensuring NAS safety through Aviator and Air Traffic Controller Specialist (ATCS) medical standards, Aviation Medical Examiner quality assurance, and Internal Safety Assurance Program (ISAP) compliance. During the COVID-19 pandemic, FAA Aeromedical Division (AAM) Flight Surgeons conducted all

internal FAA contact tracings to provide time-critical management advice, isolation, and quarantine recommendations. This resulted in reduced spread of COVID-19 and continued/uninterrupted maintenance of Air Traffic Control throughout the continental US. Our objective is to protect our FAA employees while keeping the NAS safe and operational throughout the pandemic.

What was your most satisfying experience this year?

My most satisfying experience this year was supporting the FAA and NAS through the novel Coronavirus pandemic—all while maintaining the day-to-day critical operations of our office. It was deeply rewarding to directly assist and communicate with our FAA employees as they went through COVID-19 illness, recovery, and re-integration into the workforce.

“It was deeply rewarding to directly assist and communicate with our FAA employees as they went through COVID-19 illness, recovery, and re-integration into the workforce.”

What made this challenge easier was the fantastic teamwork between AAM and other Lines of Business. FAA professionalism, teamwork, and collegiality are among the best I have ever known. This teamwork was recently recognized when our Regional Flight Surgeon COVID-19 Support/Response Medical Team was awarded the Southwest Region Administrator’s Award for their response to the COVID-19 pandemic. This recognition was humbling and deeply appreciated.

Tell us something a stakeholder would not know about your work?

I contribute to the Aerospace Medical Association and ICAO’s Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA). CAPSCA is a global program to improve preparedness

planning for global health emergencies and pandemics. We have been influential on the international level, safely supporting return to pre-pandemic flight operations.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

In alignment with OneAVS, all of the Federal Air Surgeons are working hard to innovate and standardize policies and procedures across the aviation enterprise. Significant efforts/strides are being made in the areas of Safety, Infrastructure, Innovation, and Accountability. These efforts will continue to directly enhance NAS safety and enhance customer satisfaction.

A Commitment to Improve Certification and Delegation Processes

By Earl Lawrence, Executive Director, Aircraft Certification Service



The Aircraft Certification Service (AIR) started this year, in collaboration with Flight Standards, by ending a nearly 20-month chapter focused on safely un-grounding the Boeing 737 MAX and supporting return-to-service activities worldwide. In November 2020, the FAA issued the final Boeing 737 MAX Airworthiness Directive mandating a number of software design changes. This effort represented more than 60,000 FAA hours of review, certification testing, and evaluation of pertinent documents, including over 50 hours of FAA flight or simulator tests and FAA analysis of more than 4,000 hours of company flight and simulator

testing. This event caused us, as a service, to look inward and emphasize continuous improvement in furtherance of our safety mission.

Shortly after the un-grounding, Congress passed legislation entitled *The Aircraft Certification, Safety, and Accountability Act*, which mandated sweeping changes to our oversight, delegation, safety data and reporting, and international engagement activities. AIR has embraced this legislation, which highlights the need for improvements in our certification and delegation processes and better integration within the agency and internationally.

One of the key provisions of the legislation is to expand safety management systems (SMS). The FAA has initiated rulemaking to mandate SMS for design and manufacturing organizations. Until rulemaking is complete, we will continue to foster and expand voluntary adoption of SMS. To that end, in FY21, AIR accepted the SMS programs of two companies as part of our Voluntary SMS Program.

With respect to our increased focus on human factors and system safety, AIR commissioned the Human Factors and Flight Crew Coordinating Group. This group will identify opportunities for workforce training and process enhancements



“AIR has embraced this legislation, which highlights the need for improvements in our certification and delegation processes and better integration within the agency and internationally.”

for a broad range of aircraft technologies and their associated human factors considerations. To complement these human factors initiatives, AIR established a system safety improvement team to provide recommendations for enhancing standards, policy, and guidance for system safety assessments utilized during the type certification of an aircraft.

In addition to strengthening our domestic oversight and workforce capabilities this year, AIR collaborated with other civil aviation authorities to improve safety around the world. We chartered the changed product rule international working group, as well as five Asia and Pacific (APAC) working groups.

Each of these groups aims to strengthen the harmonization of processes and competencies across civil aviation authorities. Additionally, we revised a number of bilateral agreements and entered into a new agreement with the United Kingdom Civil Aviation Authority (UKCAA) following their departure from the European Union Aviation Safety Agency (EASA).

Looking ahead, AIR has established a framework for the future that promotes a positive safety culture; improves data availability, accessibility, and analysis; and strengthens safety management oversight processes.



A Year in the Life of Luke Walker

Management Program Specialist, Aircraft Certification Service

 [Click to view the video interview](#)



“It is very satisfying that our team coordinated in the identification of something potentially unsafe, and we are working globally to finding ways to mitigate that unsafe condition.”

What do you do for AVS?

I am the acting Incident Management Program Specialist. I coordinate and monitor AIR resources and responses as they pertain to accident investigations and recommendations of potential safety concerns.

Can you describe a tough challenge you faced in 2021?

I would say that supporting the stand-up of a new branch and consolidating functions that were performed by many areas across AIR brought with it the added challenges of how it should be structured. It also raised some questions that we worked to address, including what types of traits are we looking for in new team members and how will we interact with the other elements of AIR and AVS?

All these challenges were compounded by the landscape of an on-going AIR refinement and the National Health Emergency restrictions around travel and meetings. It required us to re-engineer how we collaborated as a group to address the dynamic environment and ensure that we meet our objectives.

What was your most satisfying experience this year?

Recently, AIR-360 played a role in identifying, documenting, and introducing a safety concern to a multi-divisional audience, the AIR Safety Committee.

The topic garnered a very robust response and a resounding call to action. It is very satisfying that our team coordinated in the identification of something potentially unsafe, and we are working globally to finding ways to mitigate that unsafe condition.

Tell us something a stakeholder would not know about your work?

People say institutional change is like trying to turn a very large ship. I think change is incremental. AIR-360 is taking steps to ensure our recommended incremental changes can add up to efficiently help steer a big ship like AIR.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

I think when undertaking any type of decision making, whether it's safety-related or organizational, it is important to balance professional expertise and procedure. This would ensure that there is always transparency in how our organization makes decisions while also leveraging vast amounts of knowledge by

building strong professional relationships. It is sometimes very good to have someone available who is your “go-to,” but that must never be our single resource.

Why do you care so deeply about AVS's safety mission?

I have always been intrigued with novel designs and systems. I carry that enthusiasm into my passion for aviation safety. I may not be designing some shiny new aircraft or system, but I can find innovative ways to ensure that the current and future flying fleet stays safe.

Unity Is Our Strength, and Diversity Is Our Power

By Michael O'Donnell, Executive Director, Air Traffic Safety Oversight Service

"We experimented—testing innovative ideas and leveraging our team's diverse expertise and experience to continuously improve."



When I look back at all of the amazing work the Air Traffic Safety Oversight Service (AOV) accomplished this year, I'm humbled—and grateful—to be part of a team defined by such perseverance, positivity, and passion. Our accomplishments truly demonstrate that, "Unity

is our strength, and diversity is our power." We published our collaboratively developed, comprehensive strategy, AOV 2025—the first of its kind for our organization – at the start of fiscal year 2021. Modeling the wildly successful, proven framework of the Commercial Aviation Safety Team (CAST), this strategy codified and declared AOV's intent to take a collaborative approach to implement a risk-based, data-driven safety oversight model. United by this strategy, we drove sweeping transformation:

- We engaged—with each other and with all of our stakeholders – to be better. This included initiating collaborations with Flight Standards District Offices (FSDOs) and Certification Management Offices (CMOs) across the nation to regularly exchange safety information, identify and work on challenges, and spread best practices. We also co-hosted three "Manager's Miniseries" episodes with ATO's Safety and Technical Training (AJI) focused on building relationships, celebrating

joint successes, and sparking collaboration at all levels. Finally, we launched a "Get to Know Us" series, promoting two-way information-sharing with Flight Standards, ATO's Mission Support Services (AJV), and others.

- We experimented—testing innovative ideas and leveraging our team's diverse expertise and experience to continuously improve. We chartered a cross-organizational team to update our foundational Order 1100.161 Air Traffic Safety Oversight, the first comprehensive rewrite of this order since AOV's formation in 2004. This effort clarifies AOV's roles and responsibilities for safety oversight, and it defines and reinvigorates expectations for collaboration with others across the FAA. We also formed targeted Focus Teams within AOV to continuously monitor certain processes, programs, or procedures (aka "surveillance profiles"), supplementing AOV's current portfolio of tools and facilitating data-driven surveillance decisions. We improved our Quality

Management System program, strengthening the plan-do-check-act procedure in our processes and fostering broad stakeholder engagement and feedback.

- We excelled—achieving greater efficiency and effectiveness as one team, united behind a cohesive, thoughtful, deliberative strategy. Our Strategic Integration Action Team drove a coordinated effort to focus our limited resources strategically, balancing change with continuity. We promoted transparency and awareness through the creation of a comprehensive AOV Dashboard to integrate, map, prioritize, and monitor more than 104 ongoing AOV initiatives and activities.

United by a common strategy and leveraging our team's diversity, AOV increased collaboration and innovation, produced greater results, and ignited an unstoppable momentum in FY21. Look out 2022!



A Year in the Life of Patrice Stacy

Air Traffic Safety Inspector, Air Traffic Safety Oversight Service

[▶ Click to view the video interview](#)

What do you do for AVS?

As an Air Traffic Safety Inspector in AOV, I conduct safety oversight of the Air Traffic Organization's compliance to the ATO Safety Management System, other FAA directives, procedures, and safety standards. In FY21, I also served as Acting Deputy Manager for our Central Area Operations Branch, which ensures the continued operational safety of the NAS through monitoring of air traffic services.

Can you describe a tough challenge you faced in 2021?

AOV Executive Director, Mike O'Donnell, tells us, "We are a great organization that does great work... How do we get even better?"

We took a hard look at our organization in FY21 to answer his challenge, leading to our AOV 2025 strategy. It describes our "collaborative approach" for implementing a risk-based, data-driven oversight model and maps our path to being better. To implement the strategy, I served on the "Strategic Integration Action

Team" that mapped and prioritized all of AOV's ongoing work.

What was your most satisfying experience this year?

To fully understand how AOV works, one must consider how our oversight activities contribute to the bigger picture. Moving the ball forward on aviation safety—especially in the COVID-19 environment - meant not skipping a beat.

Despite our challenges, we:

- Continued to conduct surveillance activities in the virtual environment;
- Approved waiver requests, such as for the annual EAA AirVenture airshow in Oshkosh;
- Observed operations at Oshkosh during the airshow;
- Partnered with Flight Standards District Offices (FDSOs) and Certification Management Offices (CMOs) to share safety information and best practices; and,



"For over 20 years, I actively controlled aircraft, and I've seen just how fast situational awareness can be lost..."

- Collaborated with ATO's Safety and Technical Training (AJT) to identify and mitigate safety concerns.

In other words, we maintained a continual loop of oversight in the face of incredible challenges.

Tell us something a stakeholder would not know about your work?

I—along with my fellow ATSI - Help develop innovative tools to assist with our safety oversight responsibilities. I'm particularly proud of our "Hayburner" tool. Hayburner allows ATSI to quickly analyze an enormous number of operations across the NAS and identify incidents requiring further investigation to ensure adherence to safety standards. The tool's capabilities are unique because they are not dependent on mandatory or electronic

reporting, safety culture, voluntary safety reporting or any other subjective means of identifying risk.

Why do you care so deeply about AVS's safety mission?

I started my career as an air traffic controller. Then—like now—I'm passionate about preventing accidents and protecting human life. For over 20 years, I actively controlled aircraft, and I've seen just how fast situational awareness can be lost; putting pilots, crew members, and passengers at risk. That same responsibility for safety shared by the entire crew is what prevents accidents. In Aviation Safety, that same level of collaboration and teamwork is needed. We're all part of the "crew" that will help achieve our mission.

Driving Culture Change, Promoting Organizational Excellence, and Building Our Workforce for the Future

By Suzanne Chandler, Executive Director, Quality, Integration, and Executive Services



AVS's Office of Quality, Integration and Executive Services (AQS) supports the AVS Services and Offices on the front lines of aviation safety by championing greater organizational communications and collaboration. This year, AQS focused on driving change throughout the AVS organizational culture. We promoted excellence in our business processes and expanded efforts to recruit, train and develop the workforce of the future.

To help bolster our safety culture, we provided the leadership needed to formulate and initiate a comprehensive AVS-wide Voluntary Safety Reporting Program. VSRP will foster a cooperative, confidential, non-punitive culture for the open reporting of aviation safety

concerns by AVS employees. In this year alone, 340 reports were filed by AVS employees, demonstrating a vigorous interest by AVS employees in improving the organization's overall safety posture.

As part of our commitment to organizational excellence, AQS led a comprehensive AVS-wide effort that resulted in our achieving a three-year recertification of its ISO 9001 Standard for a quality management system. The recertification occurred after an independent audit involving interviews with 186 AVS employees. The standard recognizes an organization's adherence to a number of safety management principles, including a strong stakeholder focus, top management support, a solid process approach, and commitment to continual improvement.

We also took advantage of the challenge of remote work by using virtual platforms to improve collaboration with our industry partners, through reimagined face-to-face visits and sharing of documents that were previously delivered through time-consuming, expensive processes.

To assist in fostering collaboration between FAA leadership and labor partners, I was honored to co-chair the National Employee Involvement Team, which models collaborative behavior, establishes guidance to promote

and provide collaborative opportunities, and shares information on Agency programs and best practices. AQS designed and implemented the OneAVS Governance Board, a body that makes critical tactical decisions supporting the organization's strategic decisions. The Board, facilitated by AQS's Deputy Executive Director and made up of other AVS Deputy Executive Directors, addresses enterprise needs for operations, budget, and resources. It also tackles enterprise-wide and high-priority issues and projects.

Finally, despite not being able to conduct face-to-face outreach events with diverse groups of students and potential job candidates during the pandemic, we were able to reach more people using virtual tools. In FY21 we conducted:

- Sixteen virtual recruitment events reaching 6,500 potential candidates to support the

- hiring of safety critical and safety technical positions.
- Our first virtual STEM Career Symposia in April and September reached a nationwide audience of more than 1,000 K-12 and college students.
- Forty-six virtual outreach events to K-12 students of diverse backgrounds to broaden their awareness of aviation-related career fields, including events for Girls Empowered by Math and Science (Racine, Wis.), the Bessie Coleman Aviation All Stars (Chicago) and Choctaw Nation Career Expo (Durant, Ok.).

These accomplishments illustrate AQS's efforts to continuously improve our products and services. We appreciate the opportunity to help advance AVS's safety goals in our increasingly complex aviation environment.



"This year, Voluntary Safety Reporting Program reports were filed by AVS employees, demonstrating a vigorous interest by AVS employees in improving the organization's overall safety posture."



A Year in the Life of Aisha Kirkland

STEM Program Manager, Office of Quality, Integration and Executive Services

[▶ Click to view the video interview](#)

What do you do for AVS?

Aviation Safety's STEM Program allows us to share our commitment to protecting the NAS with the next generation of aviation professionals. As the Aviation Safety's STEM Program Manager, I oversee AVS efforts to educate, expose, and recruit youth to the FAA. Our program has two main outreach components: academics and recruitment.

The AVS STEM Program's academic outreach and education efforts focus on kindergarten through 12th grade students, as well as college students. It's important to plant the STEM seed early. We make aggressive efforts to participate in career events at the elementary, middle, high school, and collegiate levels. We also attend college career fairs and conduct informational sessions, as well as host our own signature events, such as the AVS STEM Career Symposium.

The second component focuses on collegiate recruitment and hiring. We want college students to see their future within the FAA. So it's our job to expose them to the variety of professional opportunities. We perform college recruitment and hire students through our AVS STEM Student Program, as well as through the FAA's Minority Serving Institutions Internship

Program. These initiatives enable my team to work closely with the AVS Recruitment and Outreach Council, FAA Corporate Recruitment, Office of Communications, and STEM AVSED.

Can you describe a tough challenge you faced in 2021?

Transferring the AVS STEM Career Symposium from an in-person event to a virtual event was a daunting challenge after COVID-19 prevented us from hosting an event last year. We used this time to map out how we could host the event with a virtual conference platform that gave attendees the look and feel of an in-person event.

Hosting AVS STEM Program interns in a 100% virtual capacity also provided a tough challenge as we couldn't provide our interns with FAA facility tours nor enable them to see, first-hand, our engineers, aviation safety inspectors, investigators, and medical officers working in the field.

Nonetheless, we worked very hard to ensure that they had an enriching experience by offering virtual activities such as professional development training and intern celebrations.



"AVS was deemed a trail blazer for pivoting in the pandemic and powering through the virtual space to offer an engaging experience for students."

What was your most satisfying experience this year?

My most satisfying experience was executing the very first virtual AVS STEM Career Symposium, and helping to broaden our outreach across the country to inspire students to consider STEM-oriented careers in aviation.

Our first virtual STEM Career Symposiums in April and September reached a nationwide audience of more than 1,000 K-12 and college students. AVS was deemed a trailblazer for pivoting in the pandemic and moving into virtual space to offer an engaging experience for students. I had several meetings with FAA colleagues beyond AVS to provide details on our symposium's success.

The FAA's Office of Communications is now working with the firm vFairs to conduct virtual events for the entire FAA enterprise. This means we will not have to pay to host events such as

this out of our allotted budgets. Again, teamwork amplified our efforts. I view this as a win for every FAA Line of Business.

Tell us something a stakeholder would not know about your work?

Two words: process development. Since my job began in 2019, we've put processes in place to solicit managers to host students under the AVS STEM Student Program as well for recruiting student interns and matching them with suitable offices, based on their field of study.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

I'm looking forward to implementing a college exchange program that will allow students to work with us during the school year and receive college credit. This form of outreach would expose students to FAA/AVS while branding ourselves as an employer of choice.

New Rules to Enable More Advanced Operations

By Tim Adams, Acting Executive Director, Office of Rulemaking



In Fiscal Year 2021, the Office of Rulemaking (ARM) facilitated the publication of five final rules. The publication of these five rules – Streamlined Launch and Reentry License Requirements, Operation of Small Unmanned Aircraft Systems over People, Remote Identification of Unmanned Aircraft, Special Flight Authorizations for Supersonic Aircraft, and Pilot Records Database—meets safety and innovation priorities, enabling more advanced operations for emerging technologies.

Additionally, with the publication of the Pilot Records Database rule, the FAA has fulfilled the final rulemaking activity associated with the fatal accident of Colgan Air Flight 3407. This final rule requires air carriers and certain other operators to report pilots' employment history, training, and qualifications to the database, and requires air carriers and certain operators

to review records when considering pilots for employment.

ARM continues to support several committees, including the Aviation Rulemaking Advisory Committee (ARAC) and the Safety Oversight and Certification Advisory Committee (SOCAC). Additionally, in FY2021, ARM took responsibility for two congressionally mandated committees, the Women in Aviation Advisory Board and the Youth Access to American Jobs in Aviation Task Force. These committees are tasked with developing recommendations that would attract and retain women and youth to careers in aviation. The committees' objectives align with the Administration's priority to build an aviation workforce that promotes diversity, equity and inclusion, and accessibility. Additionally, ARM continues to provide support to the Unmanned Aircraft Systems Beyond Visual Line of Sight Aviation Rulemaking Committee (UAS BVLOS ARC).

In FY21, ARM assisted in the disposition of over 700 exemptions and petitions for rulemaking. Additionally, ARM drafted and coordinated 11 S-1 determination memos documenting the Secretary's finding that certain unmanned aircraft could operate safely in the national airspace system without an airworthiness certification. Of the 8 S-1 determination memos signed since October 1, 2020 14 new unmanned aircraft over 55 pounds have been approved to operate in the United States. More broadly, since October 2020, ARM has assisted in the issuance of 73 exemptions to permit Unmanned Aircraft Systems operations.

Finally, in order to best serve ARM's mission of guiding the agency through the rulemaking, exemptions, and committee processes, in March 2021, ARM launched an office reorganization. This reorganization created a new division, ARM-300, the Regulatory Support Division, with two branches, ARM-310, Regulatory Planning

Branch, and ARM-320, Part 11 Petitions Branch. By creating this new division, ARM is now in a better position to support the committee and part 11, particularly exemptions, and processes for the FAA.



“Publication of the five rules meets FAA’s safety and innovation priorities, enabling more advanced operations for emerging technologies.”



A Year in the Life of Gregg Hollinger

IT Business Liaison, Office of Rulemaking

[▶ Click to view the video interview](#)



“It has been most satisfying for numerous FAA offices to request RIMS demonstrations for possible implementation to meet their office business needs.”

What do you do for AVS?

Within the Office of Rulemaking, I work under several different titles:

- IT portfolio manager
- IT Business liaison

Can you describe a tough challenge you faced in 2021?

One of the toughest challenges I faced in 2021 was managing ARM's new comprehensive Rulemaking Information Management System (RIMS) for the first full year of deployment. The new system created a steep learning curve for the new users as well as the support team. The system captures much more data than in the past and provides more functionality for end users. The combination of the system's massive database complexity and arrays of functionality required extensive training for the support team and end users.

What was your most satisfying experience this year?

My most satisfying experience was being a part of the successful deployment of RIMS. Implementing a comprehensive rulemaking system has been an ARM goal for the past 10 years. The team had to upgrade the outdated rulemaking system to be in line with our latest business processes and demands. We deployed the first phase of RIMS in 2018 and completed the final phase of implementation in 2021.

This final implementation resulted in the FAA having a brand-new, comprehensive system for ARM that encompasses the life cycle from the very start to the very end. Prior to RIMS, we utilized spreadsheets, network drives, and emails to capture data. RIMS has much more automation and functionality from the start of the cycle when a rule is initiated all the way to the point of it being published. The users stated,

“They loved the user-friendliness within the system.”

So far, RIMS has been a win-win for ARM. It has been most satisfying for numerous FAA offices to request RIMS demonstrations for possible implementation to meet their office business needs. Also, the Department of Transportation is discussing replacement of their legacy system with RIMS.

Tell us something a stakeholder wouldn't know about your work?

Stakeholders are unaware that there are several project stages involved prior to implementation. There is a high level of teamwork; continuous communication; and numerous hours utilized for developing, implementing, and providing end user training. Stakeholders may also be unaware that RIMS is the first newly developed cloud-based system utilized for FAA Rulemaking.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

My initial thoughts would be how the team had the mindset to utilize new technology such as the decision to provide FAA a newly-developed comprehensive rulemaking system in a cloud-based environment. This is also in alignment with our mission values of promoting safety and integrity.

Why do you care so deeply about AVS's safety mission?

The mission is a reminder that provides the purpose and direction for what we do. I believe, along with my counterparts, that we work hard and are proud of the service we provide in keeping the most efficient aerospace system in the world. It is an honor and a joy to be a part of the FAA team.



“The BEYOND program is focusing on specific remaining challenges, especially flights beyond visual line of sight.”

A Year of Progress for UAS Integration

By Jay Merkle, Executive Director, UAS Integration Office



FY 2021 has been a productive year for the FAA Unmanned Aircraft Systems (UAS) Integration Office—AUS for short. October brought the close of the three-year UAS Integration Pilot Program (IPP). The IPP led efforts to integrate UAS or drone operations into the NAS. As part of the program, state, local, and tribal governments and their industry partners were at the forefront of innovation, pushing the boundaries of their UAS operations within the FAA’s existing regulations, often including waived operations.

Shortly following the congressionally-mandated close of the IPP, AUS began a new program,

BEYOND. This program continues with eight of the nine IPP lead participants, and is informed by its learnings. In particular, while the IPP worked within the FAA’s existing regulations, it also made it clear that we’re arriving at the limits of those regulations. The BEYOND program is focusing on specific remaining challenges, especially flights beyond visual line of sight, or BVLOS for short.

But to continue expanding integration, new operational rules were needed, and FY2021 also brought with it the finalization of the Remote Identification (ID) and Operations Over People (OOP)/Operations at Night (Night Ops) rules. Both of these rules represent the next incremental steps toward further integration of UAS in the NAS. The Remote ID rule addresses aviation safety and security issues that will allow more complex operations. OOP and Night Ops will allow for more routine advanced operations without the need for waivers.

These expanded operations will assist in bringing us to the pinnacle of this phase of UAS integration: routine, scalable, economically viable, beyond visual line-of-sight (BVLOS) operations. To prepare for BVLOS operations by rule, the FAA has also begun the BVLOS rulemaking process through the convening of the UAS BVLOS Aviation Rulemaking Committee (ARC). The UAS BVLOS ARC, a committee of 90 individuals representing a variety of stakeholder groups, is a significant undertaking that will provide regulatory recommendations to normalize BVLOS operations. Once the ARC has offered its recommendations, the FAA will use the recommendations to inform the BVLOS rulemaking process.

While BVLOS drone operations have been a key part of AUS’ work, Advanced Air Mobility (AAM) integration work is also progressing. In particular, FY21 has seen the launch of the internal Advanced Air Mobility Integration Executive Council (AAM-IEC) to facilitate the safe, scalable, and timely integration of

AAM operations into the NAS. Led by AUS, this internal Council will include executive representatives from across the FAA. The establishment of this Council positions the FAA to support overall safety/risk goals, with emphasis on AAM’s impact to traditional aviation.

Even as AUS has looked to the past to evaluate next steps, it is also carefully planning for the future of drones and AAM. FY21 has been a busy year, but one of growth, learning, and planning, all of which are putting the future in sight, as always, with safety in mind.





A Year in the Life of David Dunning

Program Manager, UAS Integration Office

[▶ Click to view the video interview](#)



Please describe your essential job duties, and who you interact with on a regular basis.

My essential job duties include supporting the development of a unified FAA implementation strategy for Advanced Air Mobility (AAM). In short, I am lucky to work with teammates across the agency who are experts in aircraft certification, airspace management, infrastructure development, operational certifications, and community engagement as we work toward enabling this new industry. For anyone that is not familiar, AAM refers to a collection of new and emerging technologies, such as highly automated electric vertical takeoff and landing (eVTOL) vehicles that are being applied to the aviation ecosystem.

My day-to-day interactions involve subject matter experts and leadership across all lines of business and at varying levels of technical expertise, strategic planning, and executive support. I really enjoy having the opportunity to learn from such a diverse collection of stakeholders.

Can you describe a tough challenge you faced in 2021?

A common challenge that many of us faced in 2021 was settling into the long-term reality of a new virtual work space from our homes full of kids, pets, and the delivery man all making a cameo in our work day. At first, I was admittedly skeptical when presented with the idea of working from home. Fortunately, AVS, and specifically AUS leadership, were incredibly proactive and accommodating in their efforts to make sure that our teams had the tools that we needed to be successful.

Specific to AAM, one tough challenge that I faced this year was continuing to build upon the working structure and organizational effort required to move the AAM implementation strategy forward. Making new connections, learning new material, and taking the “50,000-foot” approach to problem solving were instrumental in shaping my small piece of the evolving AAM puzzle.

“What brings these challenges back down to Earth is returning to our roots as aviation professionals with decades of experience across so many areas of expertise.”

What was your most satisfying experience in 2021?

When a new challenge arises in AAM that is related to aviation safety, it can be confusing and unrelatable. New aircraft controls, propulsion systems, and flight performance characteristics are just a few of the unique issues that AAM presents. What brings these challenges back down to Earth is returning to our roots as aviation professionals with decades of experience across so many areas of expertise.

AAM has the potential to move the ball forward on aviation safety through technological advancements and new operational models. One example of this is automation. By reducing the workload on the pilot or operator, automation technologies have the potential to minimize errors and mistakes.

Tell us something a stakeholder would not know about your work?

AAM’s technological development is more mature than most stakeholders may be aware of. While full autonomy and high density operations are further off on the horizon, the initial aircraft and piloted operations are targeted to be operational in the next five years.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

I am optimistic that the year ahead will present many more opportunities to learn and expand my aviation knowledge. The safety mission in AAM is anchored in our successes and lessons learned from our rich aviation history. The approach I take to achieving the safety mission in this new arena is to listen first, understand the issue, apply proven solutions when available, and never be afraid to ask questions while developing new solutions.

Using Information to Improve Aviation Safety

By Warren Randolph, Acting Executive Director,
Office of Accident Investigation and Prevention



The mission of the Office of Accident Investigation and Prevention (AVP) is to make air travel safer through investigation, data collection, risk analysis, and information sharing. Despite the continuing pandemic over the past year, AVP was able to make significant strides in each of these mission areas. Through work across and outside the organization, AVP was able to gather, analyze, and share information—all with the goal of improving aviation safety.

Amidst restrictive COVID-19 travel protocols, AVP supported 172 fatal accident investigations, 32 in-depth desk investigations, and 4 on-scene investigations. When the NTSB chose not to travel to Indonesia to investigate the fatal Siriwijawa Flight 182 accident, AVP represented the US government on scene per Annex 13.

AVP also studied the use of Satellite-Based ADS-B data in international investigations. The study yielded several benefits, including making safety information available in a matter of hours versus days following an accident.

In order to share data and have it be useful, data standardization is necessary. AVP was a driving force behind the development and signing of DOT Order 1371.1, Data Trust Policy. This order standardizes government/private sector safety data sharing environments throughout DOT.

In addition, AVP led the FAA Safety Data and Analysis Team (SDAT) in their work with the Chief Data Office to transition safety data assets to the FAA's cloud environment and improve safety analysis functions throughout the agency. All of this work ensures the FAA not only expands the breadth and depth of our data, but is able to turn the data into information for decision making.

AVP uses data to feed the AVS and FAA Safety Issue Identification and Management processes. Through these processes, AVP identified safety issues and conducted Safety Risk Management on five issues, including the Emergency Autoland System. AVP documented the results of these efforts, as well as the efforts of all FAA Lines of Business and Staff Offices in screening safety data and information within their organizations, in the first Annual Safety Issue Screening Report. This report represents an important step forward in documenting and sharing information across the FAA, thereby enhancing our safety culture. This is the FAA Safety Management System in action.

“The study yielded several benefits, including making safety information available in a matter of hours versus days following an accident.”





A Year in the Life of Patrick Lusch

Accident Investigator, Office of Accident Investigation and Prevention

[▶ Click to view the video interview](#)

Please describe your essential job duties.

As an accident investigator with AVP-100, I interact with virtually every facet of the FAA, primarily with my Flight Standards and Aircraft Certification colleagues. AVP-100 reviews every aircraft accident and incident on a daily basis. Though we don't act as the Investigator-in-Charge (IIC) on most of them (a role filled by the great men and women of the Flight Standards Aviation Safety Inspector ranks), we connect daily with the assigned IIC to gather information and offer investigative assistance.

AVP-100 is also the FAA's primary liaison with the National Transportation Safety Board (NTSB). We respond to major Part 121 and 135 air carrier accidents, and worldwide accidents involving U.S.-registered or -manufactured aircraft. On any given day, I might converse with an investigator from the UK's Air Accidents Investigation Branch, or discuss flight data downloaded at the German Federal Bureau of Aircraft Accident Investigation, or the Bundesstelle für Flugunfalluntersuchung.

Can you describe a tough challenge you faced in 2021?

Due to COVID-19, with travel limited to major airline accident sites, I had to rely heavily on virtual examinations and on support from aviation professionals located elsewhere.

My "new normal" was to reach out to our Manufacturing Inspection District Offices (MIDOs) and Flight Standard District Offices (FSDOs) and recruit inspectors to be my eyes and ears at component tear-downs or test events. I struggled at first watching component inspections through the lens of webcams and smartphones, but I quickly adapted.

What was your most satisfying experience this year?

Despite the incredible challenge of working remotely, we successfully investigated over 40 major events, including an Indonesian Boeing 737 which crashed into the Java Sea, with the AVP Flight Data Lab providing immediate answers to our Aircraft Certification colleagues highlighting a unique failure mode with the auto-throttle system.



"We are on the precipice of incredible advances, like satellite streaming of recorded flight data to aid investigations when the on-board flight recorders are not recovered."

Tell us something a stakeholder would not know about your work?

When most people think of an aircraft's "black boxes," the flight data and cockpit voice recorders, most people think of the NTSB laboratory. In 2020, AVP-100 stood up our own independent flight data lab. I serve as the focal point for that program, and we've come a long way in a short time!

While FAA does not perform actual downloads from the boxes, we do receive the raw binary data from the investigative authority in charge and perform our own independent data analysis. Our 3D animated reconstructions of events are invaluable for telling an accident's story.

What are your thoughts about the year ahead and any new approaches you might be taking to achieving our safety mission?

As a new member of the European Organisation for Civil Aviation Equipment (EUROCAE) flight data recorder, cockpit voice recorder, and image recorder working groups, I'm looking forward to helping define the structure and criteria to which the next generation of recorders will adhere.

I'm excited because we are on the precipice of incredible advances, like satellite streaming of recorded flight data, to aid investigators when the on-board flight recorders are not recovered.



Using Data to Drive Safety in 2021

By Rico Carty, Acting Executive Director, Flight Standards



“Technology enabled us to conduct surveillance, to perform certification work, and to hold information-sharing meetings with top officials in the air carrier, general aviation, and maintenance segments.”

Flight Standards (FS) continued to use the FAA’s proactive, data-driven approach to meet the many challenges of FY21. The function-based FS structure and the ongoing FS cultural transition equipped us to operate well in the all-virtual environment for both normal work functions and extraordinary demands arising from COVID-19.

On normal safety functions, several issues stand out. First, FS led the development of a much-needed update to weight and balance requirements for all part 121 air carriers. We documented the new requirements for each operator’s operations specifications and led the development of a new advisory circular on this topic.

In another high-profile issue, a court decision revealed a conflict between long-standing guidance and the actual wording of the underlying regulation related to compensated

flight-instruction in certain instances. To minimize the burden on thousands of general aviation operators, FS developed a streamlined approval process that allows aircraft owners and flight instructors to quickly obtain a letter of deviation authority, (LODA) ensuring important training could continue.

Third, FS participated in the publication of final rules on Remote ID for UAS, Operation of small UAS over People, and the Pilot Records Database, and we also initiated work on several other rulemaking projects.

Fourth, in FY 21, FS developed and disseminated the first-ever FS Strategic Plan, which aligns FS goals and targets with those of AVS and the FAA.

Throughout the year, FS used video and communications technology to meet stakeholder needs while working in the all-virtual environment. Technology enabled us to conduct surveillance, to perform certification work, and to hold information-sharing meetings with top officials in the air carrier, general aviation, and maintenance segments.

In an already distraction-rich environment, COVID-19 mitigation measures brought another safety challenge: an increase in unruly passenger behavior that diverted the attention of flight crews and gate agents and made the skies less than friendly.

In response, FS formed an Unruly Passenger Task Force to assist the FAA’s Special Emphasis Enforcement Program. They helped investigate the highest risk cases, assisted FAA’s Office of Communications’ social media campaign to discourage such behavior, and worked with external stakeholders to foster a more collaborative approach to the problem.

I am proud of how the FS team met these and many other challenges, and I am confident that our dedicated workforce will continue to perform at the highest level.



A Year in the Life of Cheryl Villa

Aviation Safety Inspector, Flight Standards

[▶ Click to view the video interview](#)

What do you do for AVS?

As an Aviation Safety Inspector, my essential job duties include completing all the work for inspections, surveillance, examinations, certification, and investigations of Part 61, 133, 135, 137, & 141 operators to help ensure safety in the National Airspace System.

I work with operators, flight schools, and individual airmen on their requests and requirements. I also have the ability to educate them through the Compliance Program when the necessity arises. In completing this work, I collaborate frequently with other inspectors in my office and around the country.

Can you describe a tough challenge you faced in 2021?

Nearly all of my training required for promotion to Assistant Principal Operations Inspector and for the issuance of the FAA T10A credentials occurred in a virtual environment, including

an introduction to accident investigation class. While I missed the camaraderie of the 'in person' classroom environment, I was fortunate to be part of a very dynamic office with innovative trainers. We utilized the video communication technology (VCT) option to perform different job functions, such as Part 141 chief instructor proficiency tests, Designated Pilot Examiner surveillance, Part 135 and 141 annual base inspections, and a 44709 reexamination.

Another challenge was a case involving a person flying a helicopter without a pilot or medical certificate. The helicopter operated in a very remote area departing from and arriving to private property, which made surveillance difficult. This case gave me the opportunity to examine all options of gathering information, including working with the Special Emphasis Investigations Team (SEIT), an attorney from Office of the Chief Counsel (AGC), and Airman Certification.



"I find myself acting like a salesperson when encouraging flight schools to go beyond just complying with the regulation to foster a strong safety culture with their pilots."

What was your most satisfying experience this year?

I assisted in overseeing a couple of the large Part 141 flight schools here in Phoenix, including one that has several satellites nationwide. It has been particularly satisfying to utilize VCT to conduct Chief Flight Instructor proficiency tests and annual inspections to help the flight schools maintain compliance while they generate and grow businesses in this new environment.

Tell us something a stakeholder would not know about your work?

People perceive that inspectors will only get involved when something goes wrong. However, I spend a lot of time working with stakeholders on projects that help further their business, such as reviewing training courses and manuals and providing proficiency and competency flight checks.

In performing this kind of work, I also find myself acting like a salesperson when encouraging flight schools to go beyond just complying with the regulation so they can foster a strong safety culture with their pilots.

What are your thoughts about new approaches you might be taking to help advance our safety mission?

One of my passions is to help train new pilots. I would like to help flight schools that don't already have a Safety Management System develop a safety program that promotes a healthy safety culture. Part 141 flight schools aren't required to have Safety Management Systems, but ASI can encourage them to adopt one.

AVS SAFETY INNOVATIONS

Within the Aviation Safety organization, dedicated professionals constantly seek better ways to advance our safety mission. In 2021, the following innovations and actions helped make AVS a more efficient and effective organization.



Pilot Minute Microlearning

Pilot Minute, a new monthly microlearning series spearheaded by the Federal Air Surgeon, offers practical and relevant information for the aviation community. The videos cover mutual areas of interest, including expediting medical certification, recent advances and hot topics, aeromedical physiology, and the latest updates to help aviators partner with the FAA for safety and health. Pilot Minute is produced by the Civil Aerospace Medical Institute, Medical Education Division, in association with FAA ESC Media Solutions.

Joint AIR-Flight Standards Certification Reviews

Newly established Aircraft Certification Service and Flight Standards monthly program reviews are strengthening collaboration and increasing integration throughout the many stages of the certification process. These reviews include, as needed, other stakeholders such as FAA's Environmental, Airports, and Air Traffic offices.

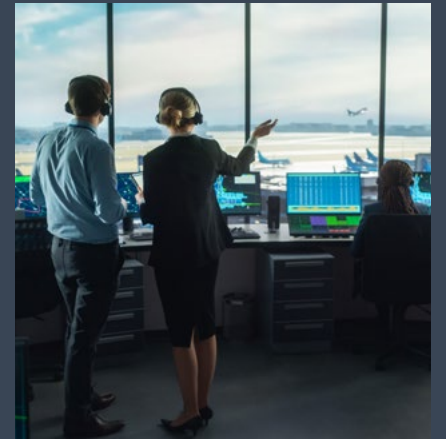


Civil Aviation Registry Electronic Services

The Flight Standards Civil Aviation Registry Division is developing the Civil Aviation Registry Electronic Services (CARES) to modernize the registry of approximately six million airmen records and over 600,000 aircraft records. The new system, expected to go live in Fall 2022, will maximize automation, optimize business processes, support risk-based decision-making, increase efficiency, and significantly reduce processing time for registration documents.

Unstable Approaches and Energy Signatures

Fusion data provided by the FAA's Aviation Safety Information and Analysis Sharing (ASIAS) system is helping to correlate unstable aircraft approaches to their energy "signatures" on approach. This information, calculated from surveillance data sources, led to the identification of two clusters of high-energy signatures associated with high rates of unstable approaches. When a high percentage of airport arrivals falls into these clusters, ASIAS can monitor unstable approach risk at airports without Flight Operational Quality Assurance coverage.

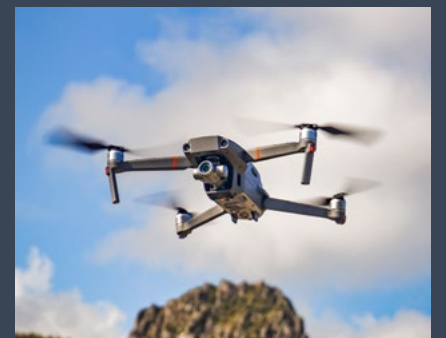


Tracking Rulemaking Progress

The Office of Rulemaking is developing an interactive Gantt Chart to track the progress of all FAA rulemaking projects, permitting the Offices of Rulemaking, Chief Counsel, and Policy and Plans to effectively plan rulemaking review schedules and expected resource constraints.

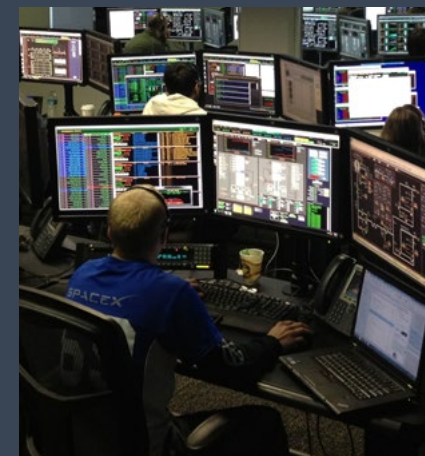
BEYOND Program for Drones

The FAA initiated the BEYOND program to build on progress made under the FAA's UAS Integration Pilot Program (IPP). To achieve safe, scalable, economically viable drone operations across a variety of environments, BEYOND tackles remaining UAS integration challenges and takes a dedicated and programmatic approach to UAS integration.



New Tool to Analyze Aircraft Position and Proximity Data

The Air Traffic Safety Oversight Service developed a tool known as "Hayburner," which uses algorithms to automate the review of hundreds of hours of radar information from the FAA's NAS Data Warehouse. "Hayburner" analyzes data with specific parameters regarding aircraft position and proximity to other aircraft, terrain, airspace, etc. to identify potential safety issues. By modernizing "Hayburner" into an enterprise, cloud-based, web application, FAA will enable screening and analysis of operations across the NAS to identify incidents requiring further investigation.



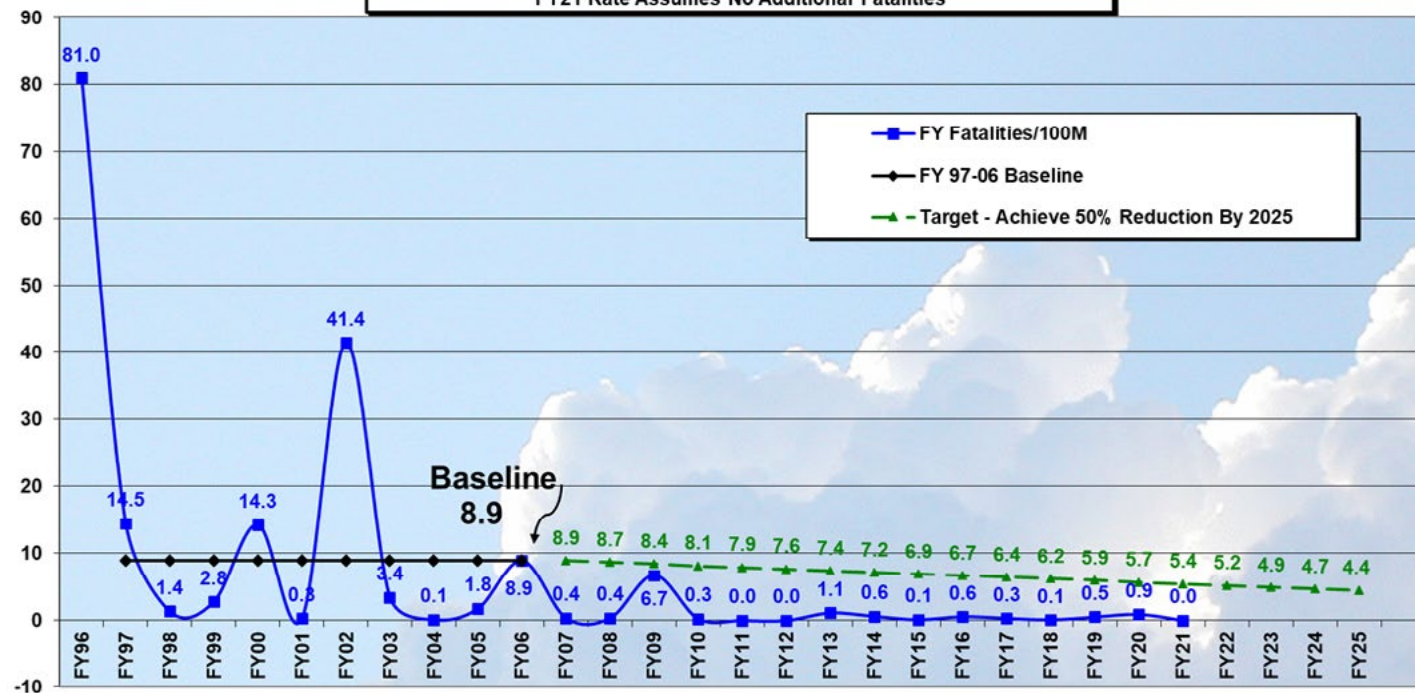
Working Toward Safer Skies



Year in Safety for Commercial Air Carriers

Air Carrier Fatality Rates/Targets Fatalities per 100 Million Persons on Board

FY21 Year-to-Date Fatalities - 0
Fatality Threshold - 28
FY21 Rate Assumes No Additional Fatalities



As of: September 30, 2021



Year in Safety for General Aviation

AVS Safety Performance GA Fatal Accident Rate (Fatal Accidents/100,000 Hours)

