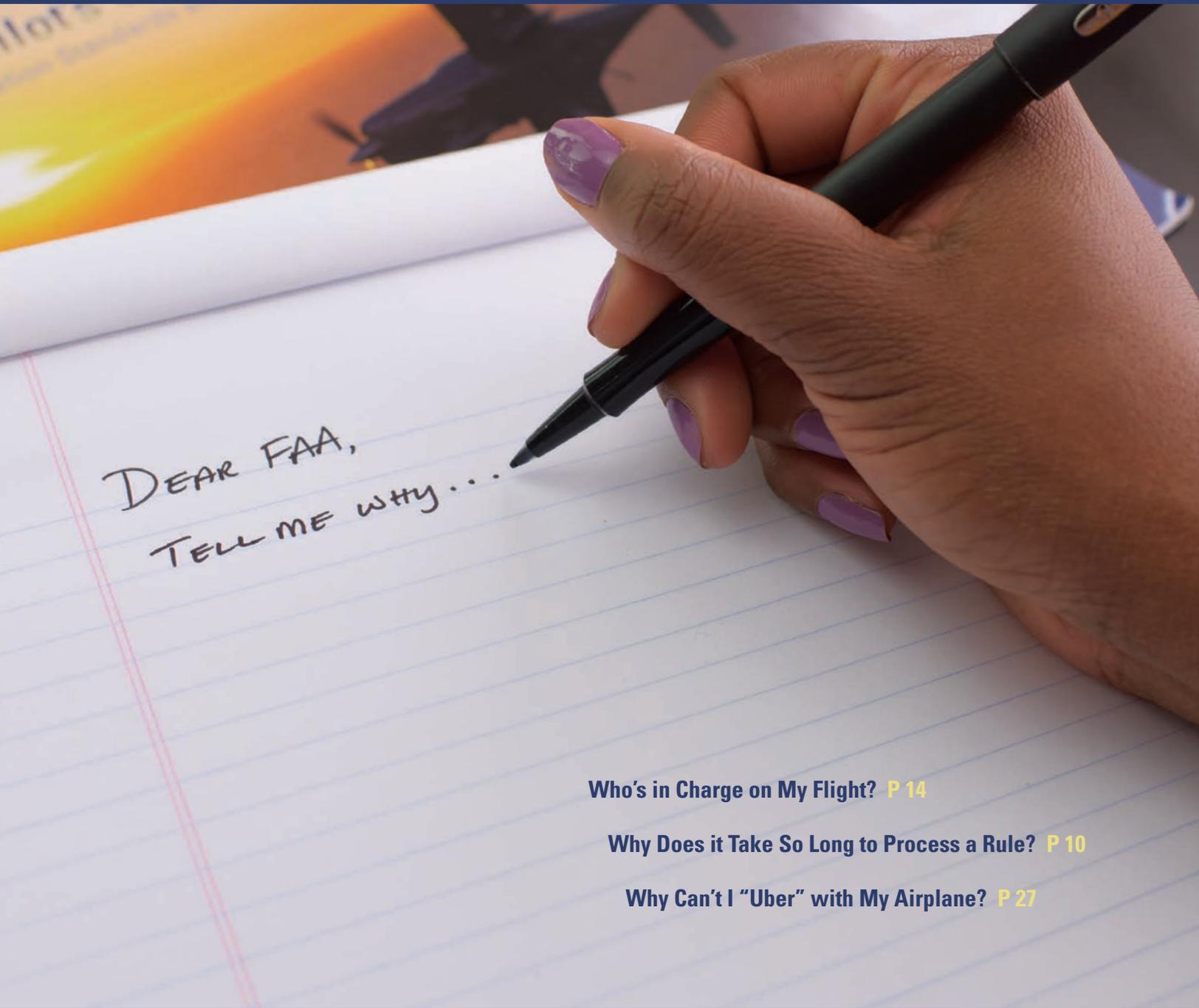


FAA Safety

BRIEFING

November/December 2016

Your source for general aviation news and information



DEAR FAA,
TELL ME WHY...

Who's in Charge on My Flight? **P 14**

Why Does it Take So Long to Process a Rule? **P 10**

Why Can't I "Uber" with My Airplane? **P 27**



Federal Aviation
Administration

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The November/December 2016 issue of *FAA Safety Briefing* focuses on many of the questions the FAA commonly receives from the public, as well as how to interact more effectively with the agency. Areas of discussion include aviation rulemaking, airman rules and regulations, and pilot resources.

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Dear FAA ...

The FAA gets a lot of questions on a wide range of issues. That's why we decided to devote this issue of *FAA Safety Briefing* magazine to answering common questions and offering information on how to interact effectively with this agency.

What is the Future of Flight Standards?

I also want to tell you what the FAA Flight Standards Service is doing to improve the way we operate. Aviation is a highly dynamic industry, and we have to change how we do business in order to keep pace with how the industry operates nowadays. For several years now, we have been working to evolve our organizational culture. At the individual level, it means a focus on interdependence, critical thinking, and consistency. For managers, it means training in the competencies of change management, mutual learning, and the "coach approach" to leadership. I am also asking Flight Standards Service managers to frame projects in terms of "organizational intent" — a concise expression of purpose that keeps everyone focused on the desired outcome, regardless of how the means of achieving that outcome may change.

To align our structure with our evolving culture, we have just started to make a shift from today's geography-based model to a function-based structure that will help us increase our agility, efficiency, and consistency.

What's in it for me?

We are implementing these changes in a way that minimizes disruption to individual employees and stakeholders, so you may not see much difference on the outside. Our field offices (CMOs, FSDOs, and IFOs) will be in the same place with the same people providing the same services. But when we combine the concept of organizational intent with our cultural changes and a more efficient reporting structure, I'm confident you *will* see and, more importantly, experience their ability to give you better answers in a more timely way. Here's how I framed that idea in a recent message to our employees:

You may be familiar with Improvisational Theatre, in which most or all of what is performed is interdependently developed without use of a prepared, written script. Improv is possible only when all participants do their part to keep the conversation going. So the first rule of improv is to respond to

another actor's comment by saying "Yes, AND ..." then adding information to advance the conversation.

The FAA can't adopt the "Yes, AND" approach when we don't agree with what a stakeholder has proposed. But we can frame "no" in a way that keeps the conversation going. We can say "No, BECAUSE ...," and then provide specific information that will help the stakeholder develop alternative means of compliance. Please don't say "no, because the guidance says ..." and leave it at that. You need to explain the rationale for the guidance. We aren't playing "gotcha," and it isn't a test. We have to provide full information so stakeholders can develop options. Then we have to use critical thinking to evaluate those options. That's what courtesy and professionalism look like in the agile, efficient, and consistent organization I want us to be.

I am sharing this message with you because I want you to know what you should expect from us, and to hold us accountable for behaving in accordance with the organizational intent of the Future of Flight Standards initiative.

What does the FAA expect from me?

So what else do we expect from you? The Jan/Feb 2016 *FAA Safety Briefing* detailed the FAA's Compliance Philosophy, which focuses on finding problems before they result in an incident or accident, using the most appropriate tools to fix those problems, and monitoring to ensure that they stay fixed. The Future of Flight Standards initiative is helping us adapt our culture and behaviors to maximize the safety benefits of this approach.

We expect you to do the same, through recognition that compliance means operating according to both the letter and the spirit of the law, and through behaviors that demonstrate willingness and ability to do just that. If there is a deviation, we expect you to acknowledge responsibility, share information to help determine cause, and promptly take corrective action.

As with all cultural changes, these efforts will take continued effort from all of us. We'll do our part, and I look to you to do yours.

Happy holidays!

Learn More

FAA's Compliance Philosophy page

www.faa.gov/go/cp



FAA International Flight Plan Mandatory Use Date Change

The change to mandatory use of the International Flight Plan format is part of an effort to modernize and streamline the delivery of flight planning services provided by Flight Service Stations and Flight Service contracted service providers. The transition to mandatory use of the International Flight Plan format for domestic and international civil flights will occur in early 2017.



With the exception of military flight operations, the international format will be required for VFR flights to Canada, as well as all IFR and VFR flights across the NAS. Delaying the implementation from the original October 1 date gives Flight Service vendors more time to modify software to accommodate some improvements in the international form, as well as develop additional inter-system messaging.

When implemented, several improvements to the international form will increase safety and make it easier for pilots to use. The new form:

- Increases the size of the departure and destination fields to allow a greater variety of entry types when implemented,
- Modifies departure and destination fields for use when filing Special Flight Rules Area (SFRA) flight plans,
- Modifies type of flight field for use when filing Defense Visual Flight Rules (DVFR) flight plans, and
- Transmits the supplemental pilot data field (i.e., pilot contact information) along with the VFR flight plan to the destination facility, which could result in reduced Search and Rescue response times by up to 30 minutes.

In addition, the international format for IFR flight plan filers using Flight Service Stations and Flight Service contracted service providers will allow for integration of Performance Based Navigation (PBN) and enhanced Air Traffic Control services.

Pilots are encouraged to become familiar with the International Flight Plan format by visiting www.faa.gov/go/flightservice.

Trends in Delivery of Flight Services

The latest FAA forecast predicts the number of turboprops, business jets, and rotorcraft in the active general aviation (GA) fleet will increase slightly while the largest segment, fixed-wing piston aircraft, will decrease over the next 20 years. The long-term outlook for GA is favorable, but at the same time, pilots continue to decline by about 5,000 per year with an expected loss of 100,000 pilots.

A similar decline occurs in the use of flight services where we see a decrease of 83 percent in overall traffic and 80 percent fewer inflight radio calls since 2005. The agency is taking a fresh look at user requirements to identify the proper delivery mechanisms for flight services. A surge in pilot preferences for automated services is leading the transition to self-service.

Metrics show pilots primarily use web-based tools to obtain flight services:

- 95% of FAA-provided preflight briefings are via web services
- 80% of flight plans are filed with the FAA via web services

Part of the increase in web services is due to commercially available briefing tools. Online services enable pilots to receive preflight briefings, file flight plans, and get automatic notifications and alerts on portable devices. In the future, these sophisticated briefing tools will help to increase the number of pilots who are self-reliant.

ADS-B broadcast services give pilots more inflight options, and enhance situational awareness and collision avoidance with onboard avionics. In addition, enhanced automation for distribution of digital NOTAMs will create fewer errors, increase safety, and graphically display data in the cockpit. Pilots flying properly equipped aircraft can see graphical weather information, where they are in relation to nearby aircraft, and flight information such as temporary flight restrictions.

The FAA continues to follow the trends to deliver more efficient flight services and eliminate those that are obsolete. Efforts are underway to reengineer inflight services for emergency frequencies and delivery of clearances. As demand reduces, there is no longer the need to maintain the large network of radio frequencies so plans are in progress to reduce the infrastructure of redundant Remote Communications Outlets. Learn more about Flight Service program changes at www.faa.gov/go/flightservice.

Maneuvering During Slow Flight in an Airplane

Curious about why the FAA changed the evaluation standard for slow flight maneuvers in an airplane? The new standard says to establish and maintain an airspeed, approximately 5-10 knots above the 1G stall speed, at which the airplane is capable of maintaining controlled flight without activating a stall warning. For background and dis-

Photo by CAP Col. Jane Davies



cussion about training and evaluation of this maneuver, download the FAA's Safety Alert for Operators (SAFO) at <http://bit.ly/2bGdaiM>.

New Air Transportation Center of Excellence at Embry-Riddle

The FAA has selected Embry-Riddle Aeronautical University to lead the new Air Transportation Center of Excellence (COE) for Technical Training and Human Performance.

"This world-class, public-private partnership will help us focus on the challenges and opportunities of this cutting-edge field of research," FAA Administrator Michael Huerta said. "We expect this team will help us educate and train aviation professionals well into the future."

The FAA is expected to invest at least \$5 million over the next five years in this partnership, with Embry-Riddle heading a team of top-tier academic research institutions and more than 20 industry partners, including the FAA's NextGen Florida Test Bed at Embry-Riddle in Daytona Beach.

Embry-Riddle will lead research and development on technical training for air traffic controllers, aviation safety inspectors, engineers, pilots, and technicians that focuses on human performance, using part-task trainers, modeling, immersive human-in-the-loop simulation, and adaptive learning technologies that are found in other technical workforces. This includes new technologies such as mobile learning and new ways of collecting and managing training data.

Safety Enhancement Topics

November: Stabilized Approach

Maintaining a stabilized approach and landing is a great way to avoid a loss of control situation.



December: Flight Risk Assessment Tool

Proper use of a FRAT can help pilots make better go/no-go decisions.



Please visit www.faa.gov/news/safety_briefing for more information on these and other topics.



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Anthony R. Foxx *Secretary of Transportation*
Michael P. Huerta *Administrator*
Margaret Gilligan *Associate Administrator for Aviation Safety*
John Duncan *Director, Flight Standards Service*
James Viola *Manager, General Aviation and Commercial Division*
Susan Parson *Editor*
Tom Hoffmann *Managing Editor*
James Williams *Associate Editor / Photo Editor*
Jennifer Caron *Assistant Editor*
Paul Cianciolo *Assistant Editor*
John Mitrione *Art Director*

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CONTACT INFORMATION

The magazine is available on the Internet at:
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Comments or questions should be directed to the staff by:

- Emailing: SafetyBriefing@faa.gov
- Writing: Editor, *FAA Safety Briefing*, Federal Aviation Administration, AFS-850, 800 Independence Avenue, SW, Washington, DC 20591
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In addition to the new Air Transportation Center of Excellence for Technical Training and Human Performance, the Embry-Riddle Daytona Beach Campus is also a core member of the FAA's Center of Excellence in Unmanned Aircraft Systems and NextGen Programs (www.assureuas.org) at the Florida Test Bed.

The FAA's COE program is a long-term, cost-sharing partnership between academia, industry, and government. The program enables the FAA to work with center members and affiliates to conduct research in airspace and airport planning and design, environment, and aviation safety.

FAA Improves Runway Conditions Reporting

"Breaking Bad" is just a television show, but for a GA pilot, braking bad on a runway is a safety concern that the FAA looks to mitigate with the new standards for reporting runway conditions at U.S. airports during adverse weather conditions. Effective October 1, 2016, GA pilots, U.S. airports, airline flight crews, dispatchers, and air traffic controllers are required to report runway conditions using the new Takeoff and Landing Performance Assessment (TALPA) standards (www.faa.gov/about/initiatives/talpa). Under TALPA, pilots will receive runway condition reports that directly relate to the way the pilot's aircraft is expected to perform. Airport operators will assess runway surfaces and contaminants, and the pilot or dispatcher will consult the aircraft manufacturer data on the stopping performance for the specific airplane they are operating.

For more information, see www.faa.gov/news/updates/?newsId=85985.



The Big Question

The FAA Extension Act of 2016, with its provisions for medical certification relief, was signed by President Obama on July 15. When the rule was signed, we immediately assigned a team to work on sorting out the details so we could write a rule that complies with the legislation and meets the required timeline.

We'd like to address some of the biggest questions that might be on the minds of many pilots. We all know there are some new requirements and limitations ... for example, pilots using this relief will need to take an online medical course and get a physical every four years from their doctor. They'll also need to follow some aircraft limitations, such as weight and speed.

When Does It Start?

The new law gives the FAA six months to write the rule, and a further six months before a "non-enforcement" period begins. What that means is that you will have to wait until the FAA's new rules implementing the legislation become effective before you can fly under this relief. In the unlikely event that the FAA is unable to issue rules by July 15, 2017, the FAA would be precluded from taking enforcement action against airmen who are complying with the new process as outlined in the law. But the FAA has confidence it will be able to publish final regulations in the Federal Register long before that date.

What Do I Need?

If you want to fly under the Act's relief, here are some of the basic requirements. You must first have a current and valid state driver's license. You must also hold, or have held, any FAA medical certificate in the ten year period counted from July 15, 2016. This means that if your medical certificate was valid at any point after July 15, 2006, you are covered. If you've never had a medical certificate, or your certificate lapsed before that date, you will have to get a one-time medical certificate. If your most recent medical certificate has been suspended, revoked, withdrawn, or denied, you will also need to get a new medical certificate before you can take advantage of the reforms. If you don't know the date of your last medical exam, you can look it up in our airmen database: www.faa.gov/licenses_certificates/airmen_certification/interactive_airmen_inquiry.

Certain conditions will still require a one-time special issuance medical certificate. Broadly, these

include certain cardiovascular, neurological, and mental health issues. The final rule will address the specifics.

Once you meet these requirements, you will need to meet some other provisions. The details are still being worked out, but as an example, pilots will be required to

complete an online aeromedical training course every two years and keep the certificate of completion in their logbooks. They'll also need to make some attestations to the FAA about their health, and consent to the same National Drivers Registry when they apply for a medical certificate.

Additionally, pilots will be required to have a physical exam from a state-licensed physician every four years. That physician will use an approved checklist and form to certify that you do not have any disqualifying conditions and are not taking any medications that would make you unsafe to fly. You must carry a form in your logbook documenting the exam.

What Can I Do Once The Rule Is Enacted?

The law allows private pilots to do most of the flying they already do. You can fly under VFR or IFR at altitudes below 18,000 feet MSL and at airspeeds below 250 knots. You can use any aircraft that has a maximum takeoff weight of 6,000 pounds (single or multi-engine) and six or fewer seats. Like all pilots, whether you hold a medical or not, you are still required to self-ground when you are not safe to fly.

Does This Mean the Third Class Medical is Going Away?

No. While medical reform offers a new medical qualification that pilots can elect to use, you can also just get a regular medical certificate the way you always have. We will use these pages to keep you informed as the answers develop, so stay tuned!

To be covered under the new rules, you must hold, or have held, an FAA medical certificate, (regular or special-issuance), in the last ten years measured from July 15, 2016.

James Fraser received a B.A., M.D., and M.P.H. from the University of Oklahoma. He completed a thirty year Navy career and retired as a Captain (O6) in January 2004. He is certified in the specialties of Preventive Medicine (Aerospace Medicine) and Family Practice. He is a Fellow of the Aerospace Medical Association and the American Academy of Family Practice.



Ask Medical Certification

PENNY GIOVANETTI, D.O.
MANAGER, AEROSPACE MEDICAL
SPECIALTIES DIVISION

Q1. When I was a child I was prescribed medications for ADHD (Ritalin or Adderall) but I haven't had a prescription for years. Can I still get a medical certificate?

A1. Yes, it is still possible to get a medical certificate. Your AME will have to defer your exam, and we will ask for past medical records about your diagnosis of ADHD and treatment. Based on those records, we may require some current neuropsychological testing as well.

Q2. I was treated for a fever at the hospital when I was a young child (5 or 6 years old). The issue was resolved at the time. Now it's 30 years later, do I need to include that in my medical history for my medical certificate?

A2. Yes. The medical history on the MedXPress form clearly states, "Have you ever in your life" The AME should be able to write a brief comment in Block 60, and then you can use the "PRNC" (previously reported, no change) option on the form.

Q3. I've had issues with depression at times in my life. It's never gotten so bad that I felt it was a danger but what options would I have if I wanted to seek treatment and wanted to continue flying at least as a private pilot?

A3. We currently have over 350 pilots of all classes flying while in treatment with certain selective serotonin reuptake inhibitor (SSRI) medications for depression. We have specific exclusions for special issuance consideration. If we grant a special issuance, we require regular follow-up visits with your AME. You should contact a HIMS (Human Intervention Motivation Study) qualified AME (www.faa.gov/pilots/amelocator) for details.

Q4. Are there any medications for seasonal allergies that are not disqualifying?

A4. Yes, you can use the non-sedating antihistamines loratadine, desloratadine, and fexofenadine while flying if, after an adequate initial trial period, your symptoms are under control, and you have no adverse side effects. Beware the risk of blockage to ears and sinuses.

Q5. How do I know how long I should wait to resume flying after I take a medication? Is there a standard waiting period?

A5. There is no standard waiting period. A rule of thumb is to wait 5 dosing intervals. For example, if you take the medication every 4-6 hours, wait 30 hours (6 hours x 5 intervals) after the last dose. To be on the safe side, consult your AME. Medications may act differently in different people, and often the safety concern is not so much the medication itself, but the underlying condition for which you are taking the medication.

Penny Giovanetti, D.O., received a bachelor's degree from Stanford, a master's in Environmental Health and Preventive Medicine from the University of Iowa, and a doctorate from Des Moines University. She completed a 27-year career as an Air Force flight surgeon. She is board certified in aerospace medicine, occupational medicine, and physical medicine/rehabilitation. She is also a Fellow of the Aerospace Medical Association and a private pilot.

Send your questions to SafetyBriefing@faa.gov. We'll forward them to the Aerospace Medical Certification Division, without your name, and publish the answer in an upcoming issue.

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Next**GEN**



What is the FEDERAL REGISTER

and Why is it Important?

Have you ever asked yourself, “So, why didn’t I know about that rule change? I wish they had just asked me ...” Well, the Federal Register can help. It’s your online ATIS, a broadcast of aeronautical information that keeps you informed on government actions that can affect you, your airport, or your aircraft. It’s also your on deck ADS-B, available to transmit your position on an aviation rule to help shape the policy decisions that affect GA.

The Federal Register (Register) was created as a one-stop shop for all things “rules and regs,” a communication tool to keep the government, and the public, informed and up to date. It’s widely used by industry and aviation associations alike, and is their key resource to check for proposed legislation or rule changes that could impact the industry in particular, and GA overall. Industry groups keep a close eye on the Register’s online Proposed Rules section to find out when a scheduled public hearing is available, or when a rule is open for public comments.

So How Can the Register Work for You?

The Register provides a daily publication on proposed changes to the U.S. Code of Federal Regulations (CFR), and any new aviation rules on the horizon. Their website, www.federalregister.gov, is a resource that keeps you informed, Monday through Friday. It gives you a heads up on proposed aviation rules,

Airworthiness Directives for unsafe conditions, or rule changes coming down the pike. It also gives you a great opportunity to find out when public hearings

are scheduled, and how you can make statements and submit data for, or against, a new or changing rule. The FAA has rules on the Register’s website that are up for review now. Use this link to take a look: www.federalregister.gov/agencies/federal-aviation-administration.

How Can I Stay Informed with the Register?

“A great way to find out which rules are under review by the FAA, real time, is to sign up for email alerts at the Register’s website,” says Lakisha Pearson, Management and Program Analyst in the FAA’s Office of Rulemaking. “You can subscribe to the topics you’re interested in, and be a part of MyFR, where you can see significant regulations and be the first to get access to FAA documents, even before they publish in the Register.” As a companion to the Register, she also suggests www.regulations.gov, the government’s portal for collecting comments and documents associated with Federal Register Notices. You can use this site to keep up to date on the FAA’s pending and completed rules, and get a heads up on future rulemaking activities, called the Unified Agenda, for this year and next.

Do I Have a Voice on What Rules Get Finalized?

Yes. You do. Federal law mandates that you have a say in the process. Under the Administrative Procedures Act, all proposed rules must be published in the Register so the public can submit comments on proposed rules. The federal government wants and values your comments as a part of the rulemaking process.

Will My Comments Make a Difference?

Yes. “Your comments are the most effective when they are solution-based,” explains Amy Bunk, Director of Legal Affairs and Policy at the Office of the Federal Register. “If you are affected by a proposed regulation, and want the agency to make a change, it’s critical that your comments offer some alternatives, or suggest concrete plans, to help improve the agency’s proposed rule.”

As a guide, she recommends the tutorials and learn links on the Register’s website to help draft your comments. Also, check out her instructional

Proposed rules are open now for public comment. Check out the FAA’s Federal Register page at www.federalregister.gov/agencies/federal-aviation-administration.

piece, "Federal Register 101." It gives a brief history on the Register and how it can work for you. Visit federalregister.gov/uploads/2011/01/fr_101.pdf.

But Does My Opinion Really Matter?

Yes, it does. Agencies review each and every public comment they receive. Your comments and alternative plans can improve a proposed rule, change it, or even cancel it entirely. Some of your comments can help improve a proposed Airworthiness Directive, or can even make it into a final, published rule.

Your experience and knowledge on all things aviation are valuable. Let the Register be the vehicle that drives your expertise and solutions straight through to the decision makers, and let it be a resource to keep you informed. You will help shape policy, and you might even make history, with a lasting legacy on a rule that will improve GA safety for years to come. ✈️

Learn More

So How Do I Get Started?

Click on www.federalregister.gov, and look for proposed rules that are open for public comment. For more information, check out the article "Out For Comments" in this issue for more detail on how proposed rules are developed by the FAA.

How do I Discover the History of a Rule?

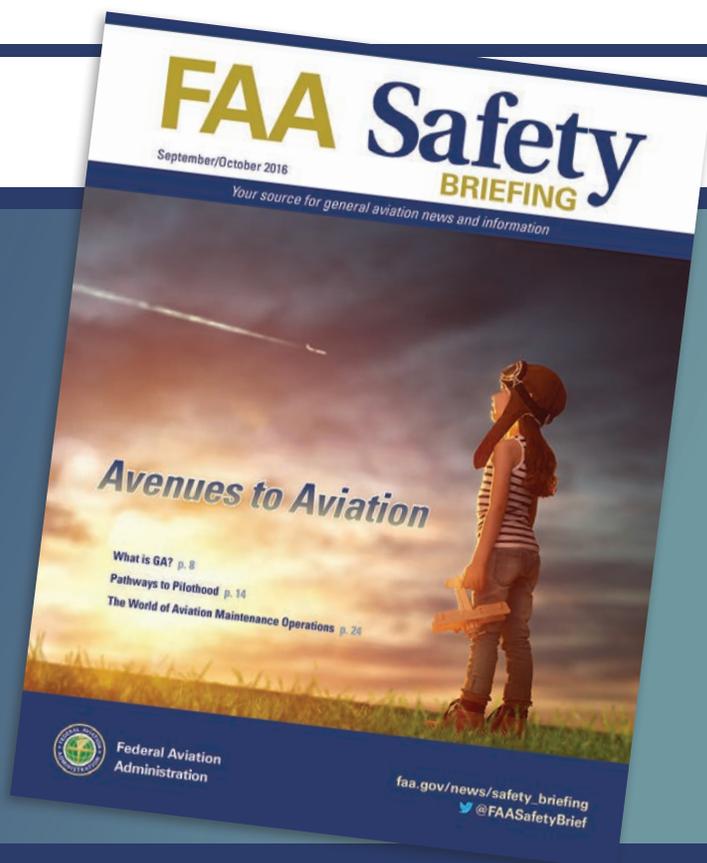
To trace the history of most rules in the Federal Register, use the rule's source note (usually found at the beginning of a subpart or immediately following the section) to obtain a citation number. For example, if you wanted to know more about the history of the sport pilot certificate, you would search eCFR for title 14, part 61, subpart J. Immediately under subpart J you would see the Federal Register citation number 69 FR 44869. Then go to www.federalregister.gov, type the citation number in the search bar to pull up the final, published rule. There you'll find all the background information on that rule, such as a link to the original notice of proposed rulemaking (NPRM), the purpose, the issue, the steps to address that issue, a summary of public comments, and the FAA's response to those comments.

Jennifer Caron is an assistant editor for FAA Safety Briefing. She is a certified technical writer-editor, and is currently pursuing a Sport Pilot Certificate.

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JENNIFER CARON

Out for Comments

Why Does it Take So Long to Process a Rule?

I'd be lying if I said it doesn't take a long time to process a rule. Whether it's issuing a new rule, or an amendment to an existing rule, the process (known as rulemaking) can take several months or even years. But that one reality begs the obvious question — why DOES it take so long?

Rulemaking should be a quick and simple process, right? Step 1 — here's an issue. Step 2 — let's write up a rule to fix it. Step 3 — let people know what the rule is, and step 4 — we're done. Unfortunately, it's not that cut and dry.

For example, let's assume the FAA has identified a safety issue that adversely affects the aviation community. Ok, so let's go ahead and write up a rule to address that issue. Sounds good, but several factors have to be considered first. What about the existing rules already in place? Do they address the issue? If not, do we amend them, or do we create new ones? What about cost? Will the new or amended rules create an undue economic burden on the aviation community? Finally, who does the rule affect — just the GA community, or the aviation industry overall?

Needless to say, all of these aspects take time to analyze and review, which can lead to a lengthy process. And, contrary to popular belief, the public's best interest is the driving force behind the rulemaking process. Designed to provide checks and balances so as not to overregulate or over burden the public, the rulemaking process helps ensure that the final rule is effective, and fundamentally helps to keep us safe.

So, What is Rulemaking?

Rulemaking is the policy-making process to issue new rules, and amend or repeal existing ones. The impetus to start the process for a rule comes from several different sources. Namely, Congress

can require the FAA to make a rule. Or, the public can petition the FAA to initiate a rulemaking. Furthermore, the FAA itself can initiate the rulemaking process to modify, create or rescind a rule to ensure continued operational safety.

How Does the Rulemaking Process Work?

To illustrate the process, let's take a look at the Light-Sport rule. It just celebrated its 12-year anniversary as the Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, Title 14 of the Code of Federal Regulations (14 CFR) section 21.190.

"The Light-Sport rule started off as an action to close gaps in existing regulations and accommodate new advances in technology," explains Sue Gardner, the FAA's National Aviation Events Specialist who helped steer the rule through the agency. "In addition, the FAA received multiple requests for exemptions from the existing rules, as well as petitions from the public to modify or create new rules that would address the new technology."

As a result, the FAA's Rulemaking Office of Primary Responsibility established an Aviation Rulemaking Advisory Committee, comprised of industry experts, aviation associations, and public interest/advocacy groups to advise the FAA on how to address the light sport needs. Over a two-year period, issues such as gross weight, fuel capacity, speed and payload (specifically, the ability to carry passengers), and the aeronautical experience and knowledge requirements for a sport pilot versus a private pilot were evaluated and carefully studied. Also reviewed were competing industry needs, cost evaluations, technology solutions, and legalities to name a few.

It's not surprising to see that this fact-finding, review and evaluation period was lengthy. And, it's

for a good reason. It is critically important that all aspects of an issue are thoroughly reviewed to ensure that any proposed solutions are sound, improve safety, and can withstand the test of time.

A new proposal was created to address these new and diverse aircraft types, and introduced new operational and certification rules for pilots. From there, a recommendation to proceed to rulemaking, called the Rulemaking Action Plan (RAP), was approved by the FAA's Rulemaking Management Council. This, in turn, triggered the six-month drafting period of the Notice of Proposed Rulemaking (NPRM). The NPRM, as published by the FAA in the Federal Register, marked the beginning of a 90-day comment period for the public, industry, and all interested parties to review the proposed light sport rule, and provide their comments.

The NPRM elicited over 4,000 comments, and per the Administrative Procedures Act, Title 5 of the United States Code, the FAA is obligated to evaluate every comment received, and responses must be included in the final rule.

When all was said and done, the timeframe for this rulemaking, from advisory committee to final rule, was more than four years. Believe it or not, considering all the analysis, the evaluations, the research, and the review and disposition of over 4,000 comments, four years is a relatively short amount of time.

How Long Does it Take to Process a Rule?

For the most part, the length of time to process a rule can be determined by how complicated and wide-scope the rule is, its economic impact, and how many people the rule affects. Notwithstanding the additional two years for committee review prior to the NPRM, a normal timeframe for rulemaking, from the NPRM to the final rule, can be around 38 to 42 months for a significant or complicated rule. And non-significant rules can take up to 30 months.

Is There a Faster Way?

Yes. But keep in mind that only non-significant rules can be processed on a fast-track. Take for example the recently published rule that allows the successful completion of a CFI practical test to satisfy part 61 flight review requirements. By contrast to the light sport rule, this CFI rule allowance took approximately six months to complete. Why? This was a Direct-Final rule. These rules can be published fairly quickly if they are non-significant and do not receive any adverse comments from the public. For instance,

the CFI rule had low economic impact, affected only a small segment of the aviation community, was merely a practical update to an existing regulation, and did not receive any adverse comments during the comment period.

And Even Faster?

Yes — for those smaller, non-safety rules only that are narrow in scope and involve only one FAA program office. Just this past March, the FAA's Rulemaking office began prototyping a new process – the Single Program Office Tool (SPOT) Rule. SPOT, as a performance-based rulemaking process, takes roughly one year, from NPRM to final rule, for smaller, non-safety rulemakings. SPOT can be used, for example, in cases where an FAA service or office may need to change a regulation to relieve a burden on industry. Take a look at the first rule published under the SPOT prototype process, www.federalregister.gov/articles/2016/07/27/2016-17612/repair-stations.

Contrary to popular belief, the public's best interest is the driving force behind the rulemaking process.

Bottom Line?

Rulemaking is a remarkable facet of our checks and balances system. The goal of the rulemaking process is to create an effective rule that ultimately improves our safety. We, the flying public, are the direct beneficiaries of the time it takes to check all the boxes. Granted, it may not seem like this sometimes tedious process exists for our best interests. But to sum it all up, I'll quote an associate of mine who says, "If you want a rule really bad, then that's exactly what you may just get." Fly safe! 

Jennifer Caron is an assistant editor for FAA Safety Briefing. She is a certified technical writer-editor, and is currently pursuing a Sport Pilot Certificate.

Learn More

Check out the article in this issue for more information on the rulemaking process

"What is the Federal Register and Why is it Important?"

For guidance concerning FAA rulemaking and current activity

www.faa.gov/regulations_policies/rulemaking/

Here's a brief tutorial on the regulatory process from regulations.gov

www.regulations.gov/?tab=learn, and a chart that gives an overview of the process at go.usa.gov/xkVBt

What if the Rule Doesn't Fit?

A quick primer on exemptions, waivers, deviations, and authorizations



(Editor's Note: For the full version of this article, please see the Jan/Feb 2011 issue of FAA Safety Briefing at www.faa.gov/news/safety_briefing/2011)

Crafting regulations that apply to every person in every possible situation is not an easy task. The FAA recognizes that sometimes the regulations may not fit every particular circumstance. That's why the agency has a number of processes that may be able to provide some relief when specific regulatory requirements do not necessarily fit your situation.

Exemptions

The primary regulatory process the FAA uses to provide relief is described in part 11 of Title 14 of the Code of Federal Regulations (14 CFR). Titled General Rulemaking Procedures, part 11 contains some important provisions that address petitions for exemption.

A petition for exemption is basically a request for relief from the requirements of an FAA regulation. How do you get an exemption? First, read part 11 carefully and follow all the procedures. The petition must include:

- Name and contact information
- The specific regulation or regulations from which you seek relief
- What kind of relief you want, and the reason you want the relief
- Why granting your exemption would be in the public interest
- Why granting your exemption would not adversely affect safety, or how an equivalent level of safety would be provided

You will also need to provide a short summary of your request that the FAA can publish in the Federal Register, along with any additional information, views, or arguments available to support your request.

Before submitting a petition, be certain the regulation from which you seek relief applies to you or the person on whose behalf you are submitting the petition. Your petition should not ask the FAA to change a rule that applies to a broad range of people because that makes it a petition for rulemaking. Also, be sure you include the right regulation(s). That sounds basic, but petitioners often fail to consider all the regulations that cover the action(s) they wish to undertake.

Other Forms of Relief

You should know that there are other ways to obtain relief. The FAA can, for example, issue a waiver, deviation, or letter of authorization. Rules and FAA guidance outline the procedures for granting these forms of relief. Typically, a waiver, deviation, or authorization is for a specific operation and often for a short period of time. Because waivers, deviations, and authorizations do not require demonstrating that a request for relief is "in the public interest," it is often easier to obtain relief using these procedures than through the more complex exemption process. If these types of relief are not available or applicable to your situation, you will need to follow the more formal exemption process.

Help is a Mouse Click Away

The Internet has eased the petitioner's path considerably. The FAA provides instructions for submitting a petition for exemption at: www.faa.gov/regulations_policies/rulemaking/petition. You can send your petition electronically via www.regulations.gov or by mail to: U.S. Department of Transportation, Docket Operations, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC, 20590. You should submit your petition at least 120 days prior to the date you need relief. If granting your petition would set a precedent, the FAA will normally publish it for comment in the Federal Register.

The FAA maintains a searchable database of all exemptions on which it has taken action at: <http://aes.faa.gov>. A quick records search will show you how the FAA responded to previous petitions, and if the agency acted on a petition similar to yours. Since the FAA treats similarly situated parties equally, you may want to use this database to look at the FAA's response to petitions similar to yours. You can see whether the petition was granted or denied, review a summary of the information provided by the petitioner, read the FAA's analysis, and learn what conditions or limitations the agency imposed if the exemption was granted. 

Learn More

Instructions for submitting a petition for exemption
www.faa.gov/regulations_policies/rulemaking/petition/

Searchable Database of Exemptions
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Photo Courtesy of Cessna



JAMES WILLIAMS

Who's In Charge?

Logging Pilot in Command Time

Once you get a new pilot certificate, the next step is to spread your wings and explore the grand new world you're now a part of. While being out of the initial training environment allows you to have some great new freedoms, it also means some new responsibilities. One of those new responsibilities is managing your logbook. In this article, we will focus on answering common questions about logging Pilot in Command (PIC) time, an area that can be confusing for some new pilots to master.

Let's start by defining PIC. The FAA defines PIC in Title 14 of the Code of Federal Regulations (14 CFR) section (§) 1.1 as:

The person who:

- (1) Has final authority and responsibility for the operation and safety of the flight,
- (2) Has been designated as pilot in command before or during the flight, and
- (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.

Acting as PIC vs. Logging as PIC

In both a practical and legal sense, only one pilot may act as PIC for any given flight. However, there are situations where a pilot can log PIC time while not acting as pilot in command. "One of the biggest issues when considering PIC time is that in order to understand it, you have to look across multiple regulations in 14 CFR parts 1, 61, and 91," explains Allan Kash, an Aviation Safety Inspector (ASI) with the

Flight Standards General Aviation and Commercial Division. To understand when you can log PIC time, you also need to understand how and why the FAA requires pilots to log flight time. For FAA purposes, a pilot is required to log certain flight time primarily to qualify for or maintain an airman certificate or rating.

Inspector Kash elaborated, "The next big issue is that the requirements to act as PIC and to log PIC time are different. There is a legal distinction. You could very well have a situation where you have both pilots legally *logging* PIC time, even though the regulations only allow for one pilot to act as PIC."

The FAA lists the requirements to serve as a required pilot flight crewmember in 14 CFR § 61.3(a) and (c). These requirements include holding a pilot certificate, photo ID, and a medical certificate (or the ability to meet sport pilot medical requirements). Additionally, § 61.3(e) requires a person acting as PIC under IFR or in IMC conditions to hold an instrument rating. Furthermore, § 61.31 requires a person acting as PIC to hold the appropriate ratings and endorsements for the aircraft type to be flown and § 61.56 requires a pilot to have a current flight review to act as PIC. So far it seems pretty straightforward, right?

Here's where the questions arise. The FAA's standards for logging PIC time are found in § 61.51(e):

(e) Logging pilot-in-command flight time. (1)

A sport, recreational, private, commercial, or airline transport pilot may log pilot in command flight time for flights-



Photo by James Williams

- (i) When the pilot is the sole manipulator of the controls of an aircraft for which the pilot is rated, or has sport pilot privileges for that category and class of aircraft, if the aircraft class rating is appropriate,
- (ii) When the pilot is the sole occupant in the aircraft,
- (iii) When the pilot, except for a holder of a sport or recreational pilot certificate, acts as pilot in command of an aircraft for which more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted. ...

Note: There are other conditions under which a pilot can log PIC in §61.51 (e)(1)(iv).

These regulations don't quite appear to match up: the rule for logging PIC time has fewer restrictions than the rule to act as PIC. So there are circumstances where you can *log* PIC while not *acting* as PIC, but you can also be acting as PIC and not be able to log PIC. Stay with me — the details and examples below will help.

Solo vs. Sole Manipulator

Let's look at § 61.51(e)(1)(ii) first, since that's probably the simplest to define and contains what you may be most familiar with from your initial training as a solo student pilot. Under § 61.51(e)(1)(ii), you may log PIC flight time when you're the only person on board the aircraft. In the most basic sense, all solo time is PIC, but not all PIC time is solo. For such a flight, you would also have to meet the requirements of § 61.3 (including holding a medical certificate), § 61.56 (flight review requirements), and § 61.31 (appropriate ratings and any endorsements required by the aircraft, such as high performance or complex).

Once you've been certificated as a pilot, if you take a non-pilot friend along on your solo cross country trip, you're no longer the sole occupant. Accordingly, you may not log PIC under § 61.51(e)(1)(ii), but you may log PIC under § 61.51(e)(1)(i) as the sole manipulator of the controls of an aircraft for which you are rated. You would still have to meet the requirements in § 61.3, 61.31, and 61.56 just as you did for a solo flight. To further complicate matters, if you take a fellow pilot along on your cross-country trip, so long as you are the sole manipulator of the controls, you may log PIC under § 61.51(e)(1)(i) regardless of who is acting as PIC. However, the fellow pilot may not simultaneously log PIC time for the portion of the flight that you are logging PIC time as the sole manipulator of the controls, even if the fellow pilot is acting as PIC, unless the requirements of § 61.51(e)(1)(iii) are met, namely more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted.

PF vs. PIC

The next quirk is that the Pilot Flying (PF) may not always be the PIC. The PF and PIC are definitely not synonymous. The clearest example is in an airline cockpit where crews will generally swap legs. The captain and first officer will switch between the PF and Pilot Monitoring (PM) roles. Regardless of who is actually flying the airplane, the captain is always the PIC. This situation could also occur in GA. Therefore, the question here is: When may a GA pilot log PIC under § 61.51(e), when not acting as PIC? One example is when a certificated flight instructor (CFI) is providing flight instruction to a student who holds at least a private pilot certificate and who is qualified to act as PIC. A CFI providing instruction to a person who is qualified to act as PIC need not be the acting PIC, yet still may legally log PIC under § 61.51(e)(3), regardless of who is manipulating the controls.

Let's examine another common example in the GA world. Let's say you and a pilot friend are going for a \$100 hamburger. Your friend suggests taking her Piper *Saratoga* (a complex high performance airplane). You both have private pilot certificates with an airplane single engine land (ASEL) rating. Your friend has both high performance and complex endorsements, but you do not. You do, however, have a lot of experience with similar airplanes and even some time in a *Saratoga*. For the purposes of this example, you both have current medicals and flight reviews. Your friend asks if you want to fly one of the legs. Are you legally allowed to fly? Are you able to act as PIC? Are you able to log as PIC?

The answers are yes, no, and yes. You may be the PF, but you may not act as PIC because you do not hold the complex and high performance endorsements required by § 61.31(e) and (f). In this circumstance, your friend is acting as PIC while you fly. You may, however, log PIC time under § 61.51(e)(1)(i) as the sole manipulator of the controls because § 61.51(e)(1)(i) requires only that you are rated for the aircraft. In this situation, you would be flying and logging as PIC while your friend is acting as PIC but not able to log PIC per § 61.51(e)(1)(iii). This is

Your friend asks if you want to fly one of the legs. Are you legally allowed to fly? Are you able to act as PIC? Are you able to log as PIC?



Photo by Susan Parson

further explained by a legal interpretation in 2009 (Speranza) <http://go.usa.gov/xk4TM>.

PIC vs. Safety Pilot

As we discussed earlier, the devil really is in the details when it comes to logging of PIC time. Nowhere is this truer than in § 61.51(e)(1)(iii). “The most common mistake I see with logging PIC is with safety pilots when required by § 91.109(c),” Kash said. He explained, “people don’t really understand the implications in § 61.51(e)(1)(iii).” Section 61.51(e)(1)(iii) reads:

When the pilot, except for a holder of a sport or recreational pilot certificate, acts as pilot in command of an aircraft for which **more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted.**

GA pilots often overlook this point because for the most part, our aircraft don’t require more than one pilot. However, in the case of simulated instrument flight, the regulations do require more than one pilot. Per 14 CFR § 91.109(c)(1), a safety pilot is required to operate in simulated instrument conditions. This makes the safety pilot a required pilot flight crewmember under the regulations for the simulated instrument portion of the flight. The safety pilot is required to hold at least a private pilot certificate, be rated for the category and class of airplane to be flown, and hold a current medical as required by § 61.3(c). If the safety pilot is acting as PIC for the simulated instrument portion of the flight, the safety pilot may log that time as PIC time under § 61.51(e)(1)(iii) because he is acting as PIC of an aircraft for which more than one pilot is required

under the regulations. The PF may also log the time as PIC time under § 61.51(e)(1)(i) as the sole manipulator of the controls of an aircraft for which the pilot is rated. Additionally, the pilot flying under simulated instruments may log simulated instrument time. However, if the PF is acting as PIC and is the sole manipulator of the controls during the simulated instrument portion of the flight, then the safety pilot may log that time as second in command (SIC) time because he or she holds the appropriate category and class ratings for the aircraft being flown and more than one pilot is required under the regulations under which the flight is being conducted in accordance with § 61.51(f)(2). This is further explained by a legal interpretation in 2012 (Trussell) <http://go.usa.gov/xk4bB>.

Let’s look at an example. You want to do some practice approaches to get ready for a big trip coming up next month, but your medical has lapsed and your appointment at the aviation medical examiner (AME) isn’t until next week. Your friend volunteers to be your safety pilot. Both of you are instrument-rated private pilots with all appropriate endorsements for the airplane. Your friend has a current medical. Can you fly? Can you act as PIC? Can you log PIC? Can you log simulated instrument time?

The answers are: Yes, no, yes, and yes. For the purposes of this flight, your friend meets the requirements for a safety pilot and the operation requires more than one pilot by regulation. You may not act as PIC because you do not have a current medical. Therefore, your friend would be acting as PIC and may log PIC under § 61.51(e)(1)(iii), but you could also log PIC time as sole manipulator of the controls when operating by sole reference to instruments and using a view-limiting device under § 61.51(e)(1)(i). Now let’s

say you have a medical and your friend does not. Does this change the answers? It does, because your friend no longer meets the requirements for a safety pilot as a required pilot flight crewmember directed by § 61.3(c). In that case, you couldn't fly simulated instruments per § 91.109(c).

Let's look at another example. You own a Cessna 182RG and need to do some practice approaches. Your friend volunteers to be your safety pilot. You both have private pilot certificates with ASEL ratings, with current medicals and flight reviews. You have a complex endorsement, but your friend does not. Can you fly under simulated instruments? Can you log PIC? What does your friend log?

The answers are: Yes, yes, and your friend may log SIC. You may operate the aircraft in simulated instrument flight because your friend meets the requirements to serve as a safety pilot. Your friend has a current medical, which is required by § 61.3(c), and § 91.109(c) requires only category and class ratings appropriate to the aircraft being flown. In this case, you would be the only one eligible to act as PIC since your friend doesn't hold a complex endorsement, which is required by § 61.31(e) to act as PIC. You may therefore log PIC under § 61.51(e)(1)(i) as the sole manipulator of the controls or under § 61.51(e)(1)(iii) because you are acting as PIC of an aircraft for which more than one pilot is required under the regulations under which the flight is conducted. Your friend may log SIC under § 61.51(f)(2) because he or she holds the appropriate category and class ratings for the aircraft being flown and more than one pilot is required under the regulations under which the flight is being conducted.

PIC vs. Dual Received

As we hinted at earlier, another common question is whether it is acceptable to log PIC and dual

received at the same time. The answer is, under the right circumstances, yes. You may simultaneously log PIC and dual received if you are rated in the aircraft (category and class), are the sole manipulator of the controls, and are receiving flight instruction. That means that once you earn your private pilot certificate (ASEL), you can log PIC during training in a single-engine land aircraft. You can log any commercial or instrument training, even in a complex airplane, as PIC for that time that you are the sole manipulator of the controls under § 61.51(e)(1)(i). This would also apply to training toward an endorsement like tailwheel, complex, or high performance. However, it would not apply to training toward a rotorcraft, glider, balloon, or airship since those are different categories. It would also not apply toward any training in a multiengine or seaplane, because those are different classes.

"I've seen lots of really smart people miss the mark when it comes to PIC," Kash explained. "The bottom line is the need to look at § 61.51(e) in light of multiple pertinent regulations and use that as the guide to whether you can still log PIC." He continued, "But just meeting the requirements to act as PIC might not mean you can log PIC because only one pilot can log PIC when the operation doesn't require, or the aircraft type certification does not require, two pilots."

Have a question about a specific circumstance? Let us know. 

James Williams is FAA Safety Briefing's associate editor and photo editor. He is also a pilot and ground instructor.

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Br eaking Ba d

What to Do When You See Someone Doing Something Wrong

SABRINA WOODS

Every once in a while the *FAA Safety Briefing* staff gets an email from a concerned reader who wants to know what to do when a fellow aviator is engaging in shenanigans. The circumstances vary from entertaining antics, to mild mischief, to downright unlawful undertakings. In each email the question always remains the same:

What do I do when I see someone doing something wrong?

I always feel for these individuals because I know if something warrants emailing the FAA, it really has to be bothersome. Still, everyone knows that no one likes a “snitch” so the risk of being labeled one is likely a big concern for the person. Aviation people can have a pack-like mentality and tend to want to stick together, so I commend those who are making every effort to ensure the safety and security of the National Airspace System (NAS). To the pleas about what to do I offer, “it depends.”

“It Depends”

I know, I know. It can sound trite and noncommittal, but your possible courses of action really do depend on the circumstances you are witnessing.

Maybe it starts in a relatively simple way. You see your buddy with the magnificent Beechcraft *Baron* being less than diligent in his preflight checks. Instead of actually checking the fuel level and calculating burn rates, he takes it for granted that he’s “only going up for an hour or so.” Complacency is when an individual loses vigilance in monitoring important aspects of a system or a process simply because it has become mundane, routine, or even boring. It can be exacerbated by a “nothing has ever happened before, so why would it now” attitude towards the process. Unfortunately, this human factors pratfall is also what can turn that twin-engine *Baron* into an impromptu glider.

Or perhaps it’s the fellow aviator making preparations to head out into what looks to be some gnarly weather. A quick check on DUATS.com confirms your suspicions but your “fellow aviator” seems oblivious. Or worse, she seems *anxious* and *in a hurry* and quickly rushes through her preflight before flinging her flight bag into the cockpit and climbing in. She is entirely focused on getting to where she is going, but you have serious misgivings that anyone should be going anywhere any time soon. *Get-there-itis* has claimed more than one life in general aviation, as

the overwhelming desire to continue on one's course overrides any external input that indicates continuing is not such a great idea.

The pilots who give in to these kinds of risky behaviors are not inherently bad people — they just aren't engaging in very good decision-making at the time.

Positive Peer Pressure

Then there are the thrill-seekers. Unfortunately, most of us have likely encountered at least one person who seems to engage in more than their fair share of "stupid pilot tricks." It might be his constant endeavor to seek the perfect selfie while on short final in Class B airspace. It may be her attempts to "buzz" her parents' house out on the rural Alaskan tundra. For the most part, it ends innocuously. Nothing bad comes of it except terrifying those who have to bear witness to the act. It's when something *does* go bad that the results can quickly go from puerile pranks to mishap and mayhem.

Prior to letting any of these situations get to that point, I encourage you to think about applying a little positive peer pressure. Easier said than done, I realize. In addition to general condemnation of the snitch, no one seems to appreciate the "butt-in-ski" either. Regardless, studies have shown that when it comes to offering gentle correction (emphasis on the "gentle" part), people react and respond better when it comes from someone they view as a contemporary. This works particularly well once you convey that you only have that person's best interest in mind.

Positive peer pressure is what makes things like group workouts and fellowship programs so effective. Trust me on this one. Not getting up at 5 a.m. to go run by myself is easily forgivable in my mind. But disappointing my running group that meets every Tuesday evening at 6 p.m., and is expecting me to be there, is just this side of anathema. Their expectation *motivates* me to be there.

Attending courses hosted by the FAA Safety Team (FAAST), and joining type clubs and aviation advocacy groups are great ideas for you and for your buddies if you can encourage them to do so. The clubs often provide safety and new technology seminars; advice about equipping items or traversing new routes; and who doesn't like gathering around the coffee pot and telling "there I was" stories? Don't have anything like that at your particular FBO? Then start one! Investing in a like-minded safety-oriented aviation group reinforces good behavior and pro-

Get-there-itis has claimed more than one life in general aviation, as the overwhelming desire to continue on one's course overrides any external input that indicates continuing is not such a great idea.



Photo by James Williams

vides great cross-tell and a chance to learn from one another's experiences.

In addition to engaging in group activities, always consider leveraging the experience and insight of your local Flight Standards District Office (FSDO). The men and women who work at the various FSDOs around the nation are dedicated to growing the field while ensuring the safety of the NAS. In particular, FSDO FAASTeam Program Managers are focused on proactive safety promotion and advocacy. Now, under the FAA's new compliance philosophy, all FSDO inspectors have even more latitude to work with an individual in what may be a lack of understanding or preparation, a flawed procedure, a miscommunication, or even a simple mistake. Under the agency's new compliance philosophy, the FAA is dedicated to conducting root cause analysis and creating new and better ways to mitigate risk, rather than just issuing enforcements.

That Being Said ...

While most of the letters we receive fall in the "bad-decision" category, every once in a while we get something that needs much more attention than a little intervention from some comrades. This is when the threat to the individual, and/or the threat to public safety are such that either the FAA or possibly even law enforcement has to get involved.

For example, what happens when that bad-decision pilot routinely goes from buzzing the countryside, to buzzing the countryside while "buzzed?" The first is a risky maneuver that could end up in tragedy, and under the right circumstances can warrant a visit from a representative of the local FSDO. The other is



downright illegal and absolutely should warrant a visit from the local authorities. Tolerances for things like alcohol and drug use, potentially debilitating medical conditions, and levels of proficiency are far more stringent for aviators than they are for operators of other vehicles. They have to be due to the higher level of risk that is inherent to the operation itself. The FAA is dedicated to using compliance actions for inadvertent violations, but violations involving intentionally reckless behavior, falsification, and repeated failure to comply cannot and will not be tolerated by the FAA — and you shouldn't let it go, either. After all, it very well could be your life that the willful behavior endangers.

Just to reinforce the point, here's something that happened one beautiful spring day in Massachusetts. A Beechcraft *Super King Air* on approach entered a steep left turn and flipped almost completely upside down before it leveled briefly, then entered a steep dive and impacted a building. The subsequent investigation and toxicology report on the fatally injured pilot determined there was a considerable amount of anti-seizure, antiviral, antidepressant, and antibiotic medicines in his bloodstream. In addition, the pilot frequently complained of debilitating pain that he was treating with a combination of morphine, codeine, and heroin.

The post-mishap report reads like a horror story, but what possibly is even more disturbing is that while the pilot neglected to disclose any of the disqualifying information on his application for a medical certificate, several people who were personally and professionally related to the pilot were aware of his condition. It appears as though they were hesitant or unwilling to raise any alarm about his willful misconduct. As a result, the pilot and

several passengers were killed and occupants of the building were gravely injured.

Being a Good Steward

Having the tough conversations, holding each other accountable, and reporting criminal behavior is an essential part of being a good steward of aviation. The Aviators Model Code of Conduct (see [Learn More](#)) recommends practices and behaviors designed to enhance the quality and safety of general aviation. Let it be your guide and solid foundation to build upon in dealing with the sticky issues that you see flying in and around your chosen FBO. When in doubt, don't hesitate to contact your local FSDO, or the FAA aviation safety hotline (see [Learn More](#)) if you need even more guidance. Together we can drive the general aviation safety mishap rate down and keep each other flying safely and happily for many years to come. 

Sabrina Woods is a guest writer for the FAA Safety Briefing. She is a human factors scientist with the FAA's Air Traffic Organization. She spent 12 years as an aircraft maintenance officer and an aviation mishap investigator in the Air Force.

Learn More

FAA Safety Team Website

www.faasafety.gov

FAA Compliance Philosophy Order

www.faa.gov/documentlibrary/media/order/faa_order_8000.373.pdf

Aviators Model Code of Conduct

www.secureav.com/

FAA Aviation Safety Hotline

www.faa.gov/contact/safety_hotline



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SAFETY *in* NUMBERS

Understanding the Parameters for Small UAS Operations

TOM HOFFMANN

Love it or hate it, we are inextricably linked to the power of numbers in our everyday lives. Although they might seem to overreach or in some cases limit our actions, numbers also provide the means for structure and safety. That's especially evident in the transportation arena, where numbers help keep our roads, bridges, tunnels (and runways) structurally sound, keep vehicle traffic moving at consistent and appropriate speeds (at least for some of us!), and provide data that drives critical decision-making and risk mitigation strategies for transportation infrastructure around the globe.

When the FAA established registration requirements for certain small unmanned aircraft systems (sUAS) in 2015, and later published the part 107 rule for non-hobbyist UAS operations in 2016, some stakeholders questioned how we arrived at some of the numbers used for operational limitations. For example: Why am I limited to only 400 feet? Why is my maximum speed 100 mph? And why were small UAS specifically limited to less than 55 pounds? (Spoiler alert: it wasn't in honor of basketball legend

Dikembe Mutombo's uniform number.) We considered these and several other frequently asked questions for this article to explain why certain sUAS requirements exist. This may prove especially helpful for those remote pilot readers who are not as familiar with the FAA's methods for promulgating safety in the National Airspace System (NAS).

Why 55?

Public Law 112-95, section 331(6) defines a sUAS as "an unmanned aircraft weighing less than 55 pounds." Prior to this law, most of the non-military sUAS in the community were under the 25 kilogram mark, or roughly 55 pounds. "This weight was dictated by Public Law 112-95," says Aviation Safety Inspector James Malecha with the General Aviation and Commercial Division. "Fifty-five pounds was the weight defined by Congress so that's what we used."

It's worth noting also that the under 55-pound limit applies to the total weight of the sUAS at takeoff and must include any payload. This is consistent with how weight restrictions are defined on other aircraft types, such as the 1,320-pound limit for light-sport.

Many of the popular (and even high-end) quadcopter models can accommodate a camera and battery and still be comfortably below 55 pounds. However, if you are planning to operate a UAS that is 55 pounds or greater, you will need to use the FAA's Section 333 exemption process (www.faa.gov/uas/beyond_the_basics/section_333) and register your UAS via the traditional paper route.

Under part 107, the maximum speed for a sUAS is 87 knots or 100 mph, with the assumption that higher speeds (like higher weight) equate to greater risks. Some commenters on the proposed part 107 rule stated that the limit should be lower, while others argued there shouldn't be a limit at all. The FAA determined the 87-knot speed risk was acceptable given that the limitation must be considered within the entire framework of rules. That is, the pilot must be able to balance the speed of the sUAS while also remaining within visual line-of-sight and cloud clearance limits, *and* operate in a manner that is not reckless or careless. There is also the expectation that a remote pilot planning to fly at the higher end of that speed limit would take the necessary precautions when performing the preflight inspection and implement the appropriate mitigations needed for that type of operation. That includes a review of emergency procedures and any potential hazards that may exist.

Like many of the operational parameters set in part 107, this is one that can be waived. The FAA will consider operation-specific mitigations to address additional risk posed by sUAS operations that exceed 87 knots.

Why is There a Ceiling?

Another limitation, which applies to both hobbyists and part 107 operations, is the 400-foot above ground level (AGL) ceiling. Since a majority of manned aircraft operations occur at 500 feet AGL and higher, this limit creates a 100-foot buffer zone between the two worlds. Exceptions include when aircraft takeoff and land and during helicopter and agricultural operations. The rule clearly states that sUAS operations should in no way interfere with aircraft operations at an airport and should always yield right of way to manned aircraft. To further boost this "see-and-avoid" protection, a remote pilot must also remain 500 feet below and 2,000 feet horizontally from clouds, operate with no less than three miles visibility, and know the location and flight path of his or her unmanned aircraft at all times.



One additional note on the altitude restriction: since part 107 operations commonly involve the inspection of structures or towers, the rules specify that a sUAS can fly within a 400-foot radius of a structure, including its highest point. For example, a remote pilot can fly at 1,600 feet AGL over a radio tower that is 1,200 feet high and still be legal.

In order to comply with the altitude and speed restrictions, remote pilots are encouraged to research some of the methods outlined in Advisory Circular (AC) 107-2, which include the use of an onboard GPS device that can detect both ground-speed and altitude. A more old-school method to eyeball 400 feet AGL is to imagine the height of a 30- to 40-story building or about two additional arm lengths above the Statue of Liberty.

Let's Talk About the Weather

Some remote pilots have asked why it's important to study weather when they're operating at such low altitudes and within line-of-sight. As we mentioned earlier, sUAS must be operated within the prescribed limits for visibility and cloud clearance to help with see-and-avoid protection. Having an understanding of weather is critical to ensuring these requirements are met. Further, a remote pilot must also be able to assess weather conditions as part of his or her required preflight actions. Atmospheric pressure and density, wind, and uneven surface heating are all factors that can affect sUAS performance and must be considered before flying. For example, convective currents, which can form over heated surfaces like a parking lot or plowed field, can adversely affect the controllability of a sUAS. Likewise, wind can also be affected by the types of terrain or structures that exist in the immediate operating area, sometimes causing abrupt

changes in direction or speed. The appendices in AC 107-2 contain helpful information on how to assess these and other risk factors before flight.

Transparency on Visibility

Some stakeholders have raised the concern that certain limitations in part 107, like visibility, cloud clearance, and prohibited night operations, are more restrictive than what's required for part 91. It's true that part 91 does allow aircraft operating in Class G airspace to operate with one statute mile visibility and to keep clear of clouds. However, as the FAA has stated in the preamble of part 107, sUAS can be difficult for manned aircraft pilots to see due to their size. Additionally, unlike manned aircraft, sUAS are not required to carry equipment like traffic collision avoidance systems (TCAS) or Automatic Dependent Surveillance-Broadcast (ADS-B) that aid in collision avoidance. Because of these factors, the FAA has determined that more stringent requirements are necessary than those found in part 91.

Night operations under the 107 rule are prohibited, but the rule does allow sUAS operations during civil twilight, provided the proper anti-collision lights are used. The rationale here is that night operations are inherently more risky and may impede a remote pilot's ability to safely perform required tasks, such as yielding right-of-way. Also, remote pilots should be aware that the nighttime prohibition is waivable through a process by which the operator explains to the FAA how they will appropriately mitigate these risks to meet an acceptable level of safety.

Why Do I Need to Take a Test?

Since the part 107 rule was announced last June, the associated remote pilot knowledge test and certification requirements are areas that have generated a great deal of discussion and feedback. Some have asked why a knowledge test is even necessary when they're not flying a plane.

Remote pilots may not be flying an airplane, but by law, they are operating an aircraft. With that privilege comes the responsibility to learn and understand certain principles of airmanship as well as basic rules, regulations, and aeronautical knowledge areas that pertain to operating safely in the NAS. These include aviation weather, airspace classification, airport operations, and much more. The knowledge test is one way of assessing competency in these areas and preparing a remote pilot candidate for what to expect in the operating

environment. Then there's the matter of meeting the statutory requirements of having an airman certificate when serving as an airman "in command ... who navigates aircraft when under way," per Title 49 of the United States Code. Finally, the knowledge test provides the opportunity for the remote pilot candidate to verify his or her identity and age with a government-issued ID, as well as verify his or her English language proficiency at the testing center.

Incidentally, before the rule became effective, a sUAS operator seeking to fly commercially was required to use a special exemption process (Section 333) that required the operator to hold at least a sport pilot certificate. Part 107, which was designed as an enabling rule to reduce the cost of entry into the commercial UAS market, relieves the sport pilot requirement and thus reduces the time and money needed to obtain an airman certificate.

While they're not required to take the knowledge test to fly under 107, some active part 61 pilots believe their training and experience in the NAS should automatically qualify them to operate a sUAS commercially. The FAA certainly acknowledges the aeronautical knowledge and flight experience necessary to obtain a pilot certificate under part 61, but the agency does not believe that knowledge and experience alone will equip the certificate holder with all of the tools necessary to safely pilot a sUAS.

To help get a better perspective on why this is, have a look at your pilot certificate for a moment. Does it include a seaplane or multi-engine rating, or rotorcraft or balloon privileges? If not, would you be legal to fly these aircraft? The same principle applies to being a remote pilot in command. The FAA understands that flying a sUAS is not nearly as difficult as the practical skills required to transition to a rotorcraft, for example, but a basic knowledge of certain unique items is required to hold a remote pilot certificate. If a part 61 pilot certificate holder meets the flight review requirements of 14 CFR section 61.56, then he or she only needs to complete a part 107 online training course available at www.FAASafety.gov to become a certificated remote pilot.

That actually leads us to another question we've received, which is why a part 61 pilot needs to be current to obtain a remote pilot certificate. "For starters, this is required simply by the fact that there are several people who may have received a pilot certificate under part 61, but who may have done so 30, 40, or 50 years ago," says Malecha. "Aviation changes constantly, so this requirement

ensures folks have a level of aviation knowledge that is up to date.”

It’s also worth pointing out that there are other ways to satisfy the section 61.56 requirements, besides having a flight review. Obtaining a new rating or certificate, completing a level in the FAAS-Team’s WINGS pilot proficiency program, or taking the regular checkride an air carrier pilot might receive through employment are all ways to satisfy the currency requirement.

Is That Your Final Answer?

Opinions may vary on the relevance of some of the operational requirements discussed here and with others found in part 107, but keep in mind that they were designed within the context of providing for the safety needs of the public, as well as all other users of the NAS.

“When part 107 was created, we contemplated risk management concepts and safety mitigation strategies as best we could with the most current technology and data,” says Malecha. “At the same

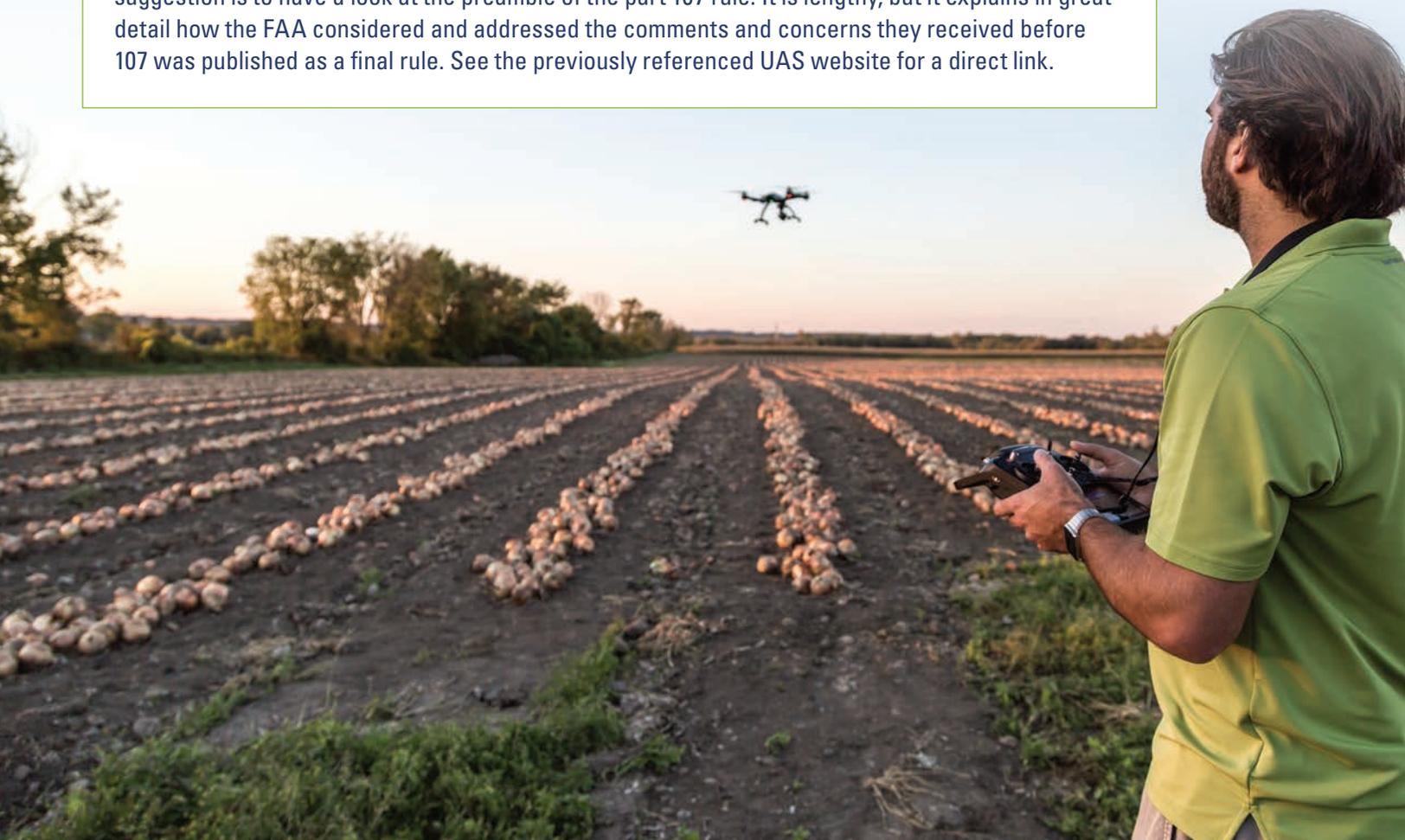
time, our aim was to impose the minimal burden necessary to ensure the safety and security of a small UAS operation.” Because small UAS technology and operations will evolve so quickly, the rule has a waiver provision for those who can provide an acceptable level of safety with actions that go beyond the basic requirements. See the FAA’s UAS waiver portal www.faa.gov/uas/request_waiver for more information.

One final note: This rulemaking is only one step in the FAA’s broader effort to fully integrate all UAS operations into the NAS. With the rule now underway, the FAA will begin accumulating additional operational experience, and number-crunching the data that can be used to assist with the integration of higher-risk operations in the future.

See, numbers aren’t all bad! 

Tom Hoffmann is the managing editor of FAA Safety Briefing. He is a commercial pilot and holds an A&P certificate.

We realize you may have other questions on areas that were not covered in this article. A full list of frequently asked questions is available on the FAA’s UAS page: www.faa.gov/uas. Another good suggestion is to have a look at the preamble of the part 107 rule. It is lengthy, but it explains in great detail how the FAA considered and addressed the comments and concerns they received before 107 was published as a final rule. See the previously referenced UAS website for a direct link.



Is it a Certificate, a Rating, or a License?

One of the most common sayings in aviation is that your pilot certificate is a license to learn, and your non-flying friends and family members will always think of that precious bit of plastic as your “pilot’s license.” You might have noticed, though, that the term “license” doesn’t appear in official documents.

Certificate = Privilege Level

The authorizing document that the FAA issues is an airman certificate, which Merriam-Webster defines as “a document certifying that one has fulfilled the requirements of, and may practice in, a field.”

A pilot can be certificated to fly aircraft at one or more of the following privilege levels: Unmanned Aircraft Systems (UAS), Student, Sport, Recreational, Private, Commercial, and Airline Transport Pilot (ATP).

Although we naturally think of flight instructors as pilots, those airman certificates are issued separately and called instructor certificates, not pilot certificates. However, a Commercial or ATP-level pilot certificate is a prerequisite for the issuance and exercise of a flight instructor certificate.

Rating = Operating Privilege

A rating is “an authorization that, as part of a certificate, sets forth special conditions, privileges, or limitations.” Ratings specify what, and/or how, the pilot is qualified to fly.

Except for pilots at the student and sport certification levels (more below), pilots at each certificate level are *rated* to fly aircraft in at least one specific category and, if applicable, class. A typical rating on a private pilot certificate is “airplane single engine land.” If you complete additional training and testing requirements for a multi-engine class rating, your private pilot certificate will then have ratings for “airplane single and multi-engine land.”

For a pilot to act as pilot-in-command of any aircraft that is more than 12,500 pounds maximum gross takeoff weight or turbojet powered, an aircraft-specific “type” rating is required, in addition to the appropriate aircraft category and class rating.

Ratings can be added to a certificate when the pilot qualifies for a certain operating privilege, such as an instrument rating, applicable to a specific aircraft category and class. Some examples of category and class include airplane single-engine land, glider, rotorcraft-helicopter, etc.

Endorsement = Completion of Specified Training

An endorsement attests to the successful completion of ground and/or flight training required for specific operating privileges, or for airman testing and certification. Endorsements and recommendations are normally provided in the pilot’s logbook. The endorsements required by Title 14 Code of Federal Regulations (14 CFR) for part 61 and 141 affect many airman certificates and privileges:

Student Pilots: Because student pilot certificates do not include aircraft category and class ratings, operating privileges and limitations for solo flight are provided exclusively through instructor endorsements that specify the make and model. Student pilot endorsements often include certain weather requirements and other operating limitations.

Sport Pilots: Like a student pilot certificate, a sport pilot certificate is issued without aircraft category and class ratings. Logbook endorsements specify the category, class, make, and model of aircraft that the sport pilot is authorized to fly as pilot-in-command.

Testing for Certificate or Rating: To take a knowledge or practical test for most pilot certificates and ratings, the applicant must have endorsements attesting to knowledge, flight proficiency, aeronautical experience, and practical test preparation.

Recurrent Training: To maintain the operating privileges for a pilot certificate or instrument rating, the pilot must have an endorsement verifying satisfactory completion of the required recurrent training or checks (e.g., flight review).

Aircraft Characteristics: The requirement for a type rating is limited to large (greater than 12,500 pounds maximum gross takeoff weight) and turbojet-powered aircraft. However, certain small and piston-powered aircraft have characteristics that require additional training and specific endorsements. These endorsements include those for complex airplanes, high performance, high altitude, tailwheel, and glider ground operations.

Does it matter? I won’t argue that it’s a safety matter. Still, using correct terms is part of the “right stuff” for being a professionally-minded pilot. So humor me, please, and say it right!

Susan Parson (susan.parson@faa.gov, or @aviBrix for Twitter fans) is editor of FAA Safety Briefing. She is an active general aviation pilot and flight instructor.



Photo courtesy of FlyOtto

WHY CAN'T I
UBER
WITH MY AIRPLANE?

THE LEGALITIES OF RIDESHARING IN THE SKIES

PAUL CIANCIOLO

It seems like a simple concept — tap a button, get a ride. That’s the basic premise for transportation network companies like Uber, Lyft, or Juno. With technology these days, the act of hailing down a taxi for a ride might seem somewhat old-fashioned.

Our on-demand economy demands innovation and speed. The “Uberization” of basic services like vacation house rentals, food delivery, laundry, housekeeping, and handyman work — to name a few — is bombarding the market. But what about Uber for airplanes, drones, or even flying cars? Let’s take a look.



Photo courtesy of FlyOtto

Ground Rules

When we are talking about an application, or app, that supports ground transportation, or any other service on the ground, local and state laws usually apply first. For example, you register your car and get your driver's license in your state of residence. The federal government doesn't get involved unless you need to transport more than eight people. There are exceptions, but you get the picture: state law regulates private ground transportation. If you don't like the laws in that state, you can always move to another state.

However, once you leave the "surface of the earth" anywhere in the United States, with anything that can sustain flight, you fall under the federal rules of the National Airspace System (NAS). In the air, you have a certificate to fly. That certificate is regulated by the federal government. On the ground, you have a license to drive, and that is regulated by your state of residence. Given these differences, you can begin to see how applying ridesharing technology is quite different on the ground than in the air.

Rules of the Sky

Our airspace is regulated by the federal government. Depending on how high or fast you fly, an accident that occurs in the air also poses a greater risk to people and property on the ground. For this

reason, the U.S. Congress charges the FAA with the ability to regulate nearly every aspect of private and commercial flight, including certification and regulation of pilots and their operations, to promote the "safe flight of civil aircraft" under Title 49 of the United States Code (USC).

Even at the federal level, not everything has the same meaning, e.g., the term "flight school" can mean an individual flight instructor according to Transportation Security Administration (TSA) rules versus FAA's definition of a flight, or pilot, school being certificated under Title 14 Code of Federal Regulations (14 CFR) part 141. For additional clarity in these areas, check out the FAA's legal interpretations and chief counsel's opinions that are published online. You can keyword search the database on FAA's website at 1.usa.gov/2bc4IdC.

That said, the FAA is not against using technology to make it easier to share a ride on a GA aircraft. In fact, companies like Gotham Air and FlyOtto are already making an impact through operations that comply with FAA regulations.

For an airman, a commercial pilot certificate is essential to the money-making status, which is a step up from that of a recreational, sport, or private pilot. A commercial pilot certificate is an added level of safety in the NAS. You must be 18 years of age, have

more in-depth aeronautical knowledge and skill, and have logged at least 250 hours of flight time in an airplane, 150 hours in a helicopter or gyroplane, or 35 hours in a hot air balloon. See 14 CFR part 61 for specific requirements.

Having that commercial pilot certificate, however, does not authorize an airman to become a commercial operator. Generally, if you're being compensated for providing a service to another person and have "operational control" of the aircraft that the service is provided with, you're going to have to be issued a 14 CFR part 119 certificate to conduct that operation under 14 CFR part 135 (or part 121 or 125 if larger aircraft or more complex operations are involved).

"In most instances where compensation is provided, the FAA has determined that this level of safety can only be achieved when the operation is conducted by at least a commercial pilot flying under the provisions of an operating certificate," explains Paul Greer, an attorney in the FAA's Office of the Chief Counsel. "The public has an expectation that both the pilot and the operator will meet a standard of competence and provide a level of safety higher than that provided by a private pilot operating solely under the general operating requirements of part 91."

Exceptions to the Rule

Under certain circumstances, a commercial pilot can conduct some commercial-type flights without the issuance of an operating certificate. These exceptions are limited and apply to activities such as flight instruction; certain types of sightseeing flights; aerial work like crop dusting, seeding, spraying, or bird chasing; banner towing; aerial photography or survey; firefighting; helicopter operations in construction or repair work (but not transportation to and from the site); and power line or pipeline patrol. Exceptions also include emergency mail service contracted by the U.S. Postal Service conducted under 49 USC section 41906 after a disaster; or small UAS operations conducted under 14 CFR part 107. See 14 CFR section 119.1 for a complete list.

Under certain circumstances, a sport, recreational, or private pilot can receive some compensation from passengers for a flight. The sticky wicket is that a pilot may not pay less than the pro rata share of the operating expenses of a flight with passengers, provided the expenses involve only fuel, oil, airport expenditures, or rental fees. The cost cannot be

paid indirectly either if that value would exceed the proportional share of the flight expenses, e.g., your passenger buying you a fancy dinner or use of their beach house. Future goodwill obtained from providing a flight has been considered compensation; see *Blakey v. Murray*, NTSB Order No. EA-5061 (Oct. 28, 2003). And you cannot receive reimbursement for shared expenses from anyone other than your passengers, such as your employer.

If you split expenses to fly as a sport, recreational, or private pilot, there must be a common purpose. The sole purpose of the flight cannot be to simply transport your passengers. If you do, it would be considered holding out as a common carrier, which is explained in Advisory Circular 120-12A, *Private Carriage Versus Common Carriage of Persons or Property* (<http://bit.ly/2cg4sWD>). There are four elements in defining a common carrier: (1) a holding out of a willingness to (2) transport persons or property (3) from place to place (4) for compensation. This common law definition in an aviation context has been upheld by the courts in 1993 and again in 2015. Holding out can be as simple as posting a notice on a publically accessible community bulletin board or as blatant as advertising your flight through a ridesharing app for private pilots.

Some start-up companies have tried to apply ground-based logic to provide a web-based service through which private pilots could offer their planned itineraries to passengers willing to share the pilots' expenses. However, this type of operation is by all aviation-related definitions simply flying as a common carrier. Companies that want to be a technology partner and give the public access to open charter seats can do so legally under current FAA regulations. This type of innovation can reduce idle time and expand utilization of GA aircraft when maintained under 14 CFR part 135.

The FAA has a responsibility to ensure safety in the air and to protect people and property on the ground. And you, as a pilot, have a shared duty to be a responsible user in the NAS. It's okay to want to be compensated for doing what you love — flying! You must ensure that you, your aircraft, and your operation are properly certificated before clicking the first "accept" button on your new *skysharing* app. 

Paul Cianciolo is an assistant editor and the social media lead for FAA Safety Briefing. He is a U.S. Air Force veteran, and a rated aircrew member and public affairs officer with Civil Air Patrol.

Look Listen FOCUS

LIVES
ARE AT
STAKE!



- **IT CAN HAPPEN TO YOU:** You may accidentally land without a clearance when transitioning from a non-towered airport to a towered airport.
- **THE FIX:** Place a brightly colored sticky note reminder on the instrument panel with tower frequencies so you won't forget!



Federal Aviation
Administration

For additional runway safety education, take the AOPA Air Safety Institute's Runway Safety online course at www.airsafetyinstitute.org/runwaysafety.



Airworthiness Directives

What is the Process, and Why are they Important?

Is a mechanic or maintenance facility responsible for maintaining my aircraft in an airworthy condition? As a student pilot, I asked my flight instructor for the answer. He said, “No, your mechanic or maintenance facility is not responsible. You, as the owner or operator, are responsible for maintaining your aircraft in an airworthy condition, and that includes compliance with part 39, Airworthiness Directives.”

Airworthiness Directives (ADs) are legally enforceable regulations under Title 14 of the Code of Federal Regulations (14 CFR) part 39. ADs let us know when an unsafe condition exists with an aircraft, engine, propeller, or appliance, if that unsafe condition is likely to exist or develop in other products of the same type design, and what actions we, as owners or operators, are required to do to resolve it. In fact, section 91.7(b) states “The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.” Non-compliance with an AD makes the aircraft unairworthy.

There’s no question that I cannot operate my plane unless I meet the conditions of the AD, or meet the conditions of an approved alternative method to comply with that AD.

But does the mechanic, maintenance facility, or even the owner/operator have an input in the AD process? “Yes,” my instructor explained, “it takes a village to create an AD, and input from the GA community is one of the key factors in the AD decision-making process.”

What is the AD Process?

The FAA uses a data-driven, risk-based approach to analyze continued operational safety data and monitor safety in aircraft fleets. Risk-based decision making looks at data to learn where risks and potential problems may exist, and how to address them before an accident can happen. Collected from multiple sources, such as aviation accidents and service difficulty reports (SDRs) to name a few, the FAA uses safety data to filter and identify safety concerns. Multiple experts, such as aviation safety engineers and inspectors, review the data to assess the risk and

then trigger, if necessary, mandatory or non-mandatory corrective actions to address the safety concern.

Non-mandatory corrective actions come in the form of recommendations, such as Special Airworthiness Information Bulletins. Mandatory corrective actions are ADs, and depending on the immediate risk, the FAA will issue either an emergency or a proposed AD.

How Does GA Contribute to the AD Process?

In cases where an emergency does not exist, the FAA publishes the proposed AD as a Notice of Proposed Rulemaking (NPRM) in the Federal Register. The NPRM opens up a comment period that provides the public an opportunity to take a look at the issues noted in the proposed AD, the solutions the AD offers to correct the unsafe condition, and the recommended compliance timeframes. The public can add to, offer suggestions, express alternatives to these proposals, and recommend alternative means of compliance before the proposed AD, with its compliance conditions and timeframes, becomes a final, mandatory rule.

Public comments, from mechanics and owners alike, are valuable and can help the aviation community better understand the severity of an unsafe condition, or suggest alternative ways to comply. Take a look at the article “What is the Federal Register, and Why is it Important?” found earlier in this issue for more on how you can help shape ADs and contribute to the AD process.

Mechanics and owners can also contribute to the AD process by supplying GA aviation data to the FAA using SDRs and Malfunction or Defect Report forms. These forms report aircraft service problem data to the FAA and provide for the analysis of service problems, can detect safety issues early on, and expedite corrective actions and ultimate solutions. The aviation data provided by these reports assist the FAA in its risk-based approach to the AD decision-making process.

Why are ADs Important?

Safety. ADs let us know when an unsafe condition exists, and sadly, there are too many cases

The FAA uses a data-driven, risk-based approach to analyze continued operational safety data and monitor safety in aircraft fleets.



where owners or operators did not comply with an AD, and accidents or incidents occurred as a result. This past August, a Piper PA28-161 lost engine power on approach and ended up in a lake. Non-compliance on an AD was to blame for the loss of power. Luckily, the pilot swam to safety, but in many other cases, a fatality is the unfortunate result. Reportedly, when investigators questioned the pilot, he said he didn't know there was an AD issued on his plane.

The More You Know. Awareness of ADs that exist on your aircraft is important, and knowledge can equal safety. There are many ways that mechanics and owners/operators can keep current on ADs

issued for aircraft and their compliance timeframes. Check out the FAA's website www.faa.gov/regulations_policies/airworthiness_directives/ where you

There's no question that I cannot operate my plane unless I meet the conditions of the AD, or meet the conditions of an approved alternative method to comply with that AD.

can sign up for alerts. Visit rgl.faa.gov to search for ADs using a manufacturer or model number. You can also go directly to the Federal Register's site at www.federalregister.gov/agencies/federal-aviation-administration.

Other ways to learn more about ADs that apply to your aircraft include joining a type club, subscribing to GA publications (like this one!), and becoming involved with GA organizations or advocate groups.

Maintenance. Performance rules for repairs and maintenance apply to mechanics and maintenance facilities under 14 CFR section 43.13. However, owners or operators are responsible for maintaining an aircraft in an airworthy condition, not mechanics or maintenance facilities. It is a good idea for owners/operators to partner up with their favorite mechanics or repair stations to keep current on ADs affecting their aircraft of responsibility, and ensure that AD compliance is covered during annual and 100-hour inspections.

Owner/operators should work with maintenance technicians and staff to review the logbooks after maintenance. It is the owner's responsibility to ensure AD work is complete, and recorded properly in the logbook.

Insurance. Your aircraft insurance policy almost always states that you must maintain your aircraft in an airworthy condition, or the policy can be deemed null and void. If you have an accident, and there are outstanding ADs on your aircraft, your insurance company may elect not to pay for damages, as the aircraft is considered unairworthy with non-compliance to ADs.

Money. Research an airplane's AD history before you buy and factor into your purchase price any compliance work that's overdue. The last thing you want to do is buy an aircraft that has an expensive compliance. As the new owner, you will have to foot the bill for that compliance before you can operate your plane.

Mechanics or owners may know of less costly alternatives for compliance with an AD. You can submit Alternative Methods of Compliance (AMOC) to seek approval on less expensive corrective methods or if necessary, alternative timeframes for compliance. Check out "AMOCs, ADs, and You" in this issue's Vertically Speaking department for more details.

Operators, owners, mechanics, and maintenance facilities are all partners in aviation safety, and ADs are critical elements in maintaining that safety. Stay informed, and contribute your expertise to keep planes airworthy, enjoyable, and safe to fly.

Jennifer Caron is an assistant editor for FAA Safety Briefing. She is a certified technical writer-editor, and is currently pursuing a Sport Pilot Certificate.

Learn More

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How Do I Find What I Need at FAA.gov?

Whether you're a veteran pilot, or an aviation greenhorn dabbling in unmanned aircraft system (UAS) operations, you'll likely need to be able to find airman "stuff" on FAA.gov. And yes, the FAA has plenty of airman related "stuff" available! Everything from air traffic publications, to accident data, to all the latest handbooks and training resources is just a click or two away. However, the question we often hear is, how do I find what I'm looking for? Allow me to offer some guidance that should help make your next visit to FAA.gov more fruitful and efficient.

A good, and often overlooked place to start on the FAA.gov home page is the *FAA For You ...* button located in the upper right corner of the page. Mousing over this button brings up a list of categories based on popular areas of interest (e.g., pilots, mechanics, aviation educators, etc.). If what you're searching for falls into one of those categories, you're in business and you will see a new page specifically dedicated to that user group. For example, pilots will see a portal with links to pilot and medical certification resources, training and testing materials, and flight operation and program information. There's also a helpful tool on the pilot portal for finding out more about the different FAA headquarters and field offices, as well as locating a designee near you.

Another good starting point for your search is to use the A-Z index in the upper right corner, and directly to the left of the *FAA For You ...* link. Numbers are also included on this list, but only for some of the major forms or FAA Orders. If you're looking for specific regulations or guidelines not listed there, the home page has a portal, front and center, that lists the most recent Advisory Circulars, Airworthiness Directives, forms, notices, and more. The tabs for each of these items also contain search functions to let you search within that group of documents or link to a more comprehensive list.

Most of the information on FAA.gov is also contained within the seven main tabs that run along the top of the site: *Aircraft, Airports, Air Traffic, Data & Research, Licenses & Certificates, Regulations & Policies, and Training & Testing*. Hovering over any of these brings up a menu of associated sub-topics that are all hyperlinked. This method might require a bit more savviness in terms of knowing where things are located initially, but the menus are organized intuitively. Each page within FAA.gov also displays a navi-



gation menu along the left margin to help you find your way within a particular topic area. In addition, you can always use the search button that appears at the top of any page within FAA.gov.

Going back to the home page layout, you should also notice a "slider" that features a set of recent news items with photos. If what you're looking for is topical, you might consider toggling through the four or five items there. More featured topics and events can be found near the bottom of the page, including banner ad links that provide quick access to some of the FAA's more popular areas, like the NextGen and UAS pages.

Safer Skies Through Education

If you're enrolled in the WINGS Pilot Proficiency Program, you're likely familiar with the FAA Safety Team's website, www.FAASafety.gov. If not, have a look. The site is dedicated to aviation safety outreach for pilots and aviation maintenance technicians (AMTs). You'll find information on hundreds of courses and seminars on any number of aviation safety topics. It also hosts the online part 107 training course for small UAS that active part 61 pilots seeking a remote pilot certificate will need to complete.

FAASafety.gov's home page is broken out into different portals, including featured courses, upcoming seminars, and both the WINGS and AMT Awards Programs. There's also a series of quick links at the bottom of the home page that connects you back to several airman relevant areas of FAA.gov.

Still have questions on finding what you need on FAA.gov or FAASafety.gov? Shoot us an email, and we'll provide vectors to get you to your destination.

Tom Hoffmann is the managing editor of FAA Safety Briefing. He is a commercial pilot and holds an A&P certificate.

AMOCs, ADs, and You

If you're a helicopter pilot, you likely know the FAA from your communications with air traffic control. If you're renewing a flight instructor certificate, or adding ratings, you might be working with representatives from the FAA's Flight Standards Office. Helicopter mechanics working in repair stations frequently interact with FAA inspectors. You will likely know the Aircraft Certification Division (ACD), if you handle Airworthiness Directives, also known as ADs.

For those unfamiliar with ADs, they are legally enforceable regulations typically used to identify an unsafe condition, such as a faulty part or maintenance procedure pertaining to an engine, rotor system, or another part of a helicopter. The AD requires "corrective action" to prevent an accident.

AIR understands there can be more than one way to address a safety concern.

This corrective action can involve anything from repairs, to replacements of faulty parts, added safety inspections, or limitations on parts or systems. In certain cases, ADs allow pilots to check a part or a system, when a mechanic is not available, to ensure its condition and usability.

What's an AMOC?

Helicopter manufacturers, operators, pilots and mechanics can request an AMOC (Alternative Means of Compliance) to meet an AD's compliance requirements provided it ensures an equivalent level of safety. AMOCs often can be a more cost effective and efficient means of meeting AD requirements. AIR understands that there can be more than one way to address safety concerns, and the FAA's Rotorcraft Directorate Standards Staff and Aircraft Certification Offices (ACOs) are always on hand to review specific requests for an AMOC. Contact an Aircraft Certification Office or the Rotorcraft Standards Staff directly to request an AMOC.

There are ways to get a more timely decision on your AMOC request. Here are some helpful tips:

1. For mechanics, discuss your proposed AMOC with your FAA Principal Maintenance Inspector (PMI). Your PMI can provide feedback on your proposal and forward it to the correct office for a timely approval.

2. Use the AMOC contact address on the AD. Send an email, if an email address is provided, or send your request by regular mail. However, do not address it to the engineer listed on the AD; the office staff will forward your request to an appropriately qualified and available engineer who can help expedite your request. When you use this direct-send method, it also gives FAA managers a heads-up that an AMOC request is in progress, and they can step in and speed up the request.

3. Clearly state the reason for the AMOC. Include your analysis to show how your proposal ensures an equivalent level of safety compared to the AD's established requirements, which are contained in the Required Actions section.

4. Include the Directorate Identifier, and the specific AD number that prompted your request. This step saves AIR engineers time, and confirms they have the correct AD for meeting your request. The AD number is found at the top of an AD. For example, you will typically see: [Docket No. FAA-2016-4280; Directorate Identifier 2016-SW-008-AD; Amendment 39-18429; AD 2016-05-11]. In this case, you would include in your request the Directorate Identifier 2016-SW-008-AD and AD 2016-05-11.

5. Let the Directorate Standards Staff or ACOs know if the AMOC is for a single helicopter or for a "global" AMOC. A global AMOC would apply to all models of that helicopter. If the AMOC applies to only one helicopter, they will need that helicopter's tail number and serial number for better identification.

"The more information you put in the AMOC, the faster we can make a determination," two directorate engineers explained. "If we have to contact you for additional information, then it takes more time to do the evaluation and make a final decision."

The FAA understands that compliance with an AD can be an added expense, and they consider all AMOC requests with an open perspective. At the end of the day, our first priority is always aviation safety.

Gene Trainor is a technical writer and editor for the Rotorcraft Directorate in Fort Worth.



Simulator Logbook Entries

Editor's note: The following letter has been edited due to space constraints.

I enjoy reading the FAA Safety Briefing, and hope you can answer this question. For instrument flight experience, I have been using the RedBird FMX simulator. Per 61.51(g)(4) there needs to be an “authorized instructor” present to observe the time, sign my logbook, and verify the time and content of the training session. Who is an “authorized instructor” for this purpose? I am not getting training, just currency. Does it need to be a CFII, a CFI, or a Ground Instructor?

I can do simulated instrument approaches in a real airplane, with only a safety pilot, who may not be an instructor, and doesn't have to sign my logbook, why would I need someone with more authority when I use a simulator? I would think I only need to make a logbook entry of the approaches, and holding, locations, and the type of simulator.

— Hal

Thanks for your questions. The supporting authority on the topic is found in Title 14 of the Code of Federal Regulations, part 61 and its subparts.

Part 61.1 defines an Authorized Instructor as (i) A person who holds a ground instructor certificate issued under part 61 of this chapter and is in compliance with section 61.217, when conducting ground training in accordance with the privileges and limitations of his or her ground instructor certificate;

(ii) A person who holds a flight instructor certificate issued under part 61 of this chapter and is in compliance with section 61.197, when conducting ground training or flight training in accordance with the privileges and limitations of his or her flight instructor certificate; or

(iii) A person authorized by the Administrator to provide ground training or flight training under part 61, 121, 135, or 142 of this chapter when conducting ground training or flight training in accordance with that authority.

Yes, it must be an authorized “flight” instructor.

To answer your question regarding flight simulators, an authorized instructor must be present to verify the time. Additionally, an instructor must be present when accomplishing instrument experience requirements, and the instructor must validate the session. Section 61.51(g)(4) states, “A person can use time in a flight simulator, flight training device, or

*aviation training device for acquiring instrument aeronautical experience for a pilot certificate, rating, or instrument recency experience, **provided an authorized instructor is present to observe that time and signs the person’s logbook or training record to verify the time and the content of the training session.***

In regard to logbook entries, this information (an entry of the approaches, holding, locations, the type of simulator), plus the instructor’s endorsement would be necessary. Since time in a full flight simulator, flight training device, or aviation training device can be credited towards experience requirements acquired in an aircraft, a ground instructor cannot verify the time and content. However, an authorized “flight” instructor can. Verifying time and content for instrument experience (currency) in this scenario is not considered training; therefore, any authorized flight instructor could sign the person’s logbook to verify the time and the content, per 61.51(g)(4). However, if the instructor provides any training pertinent to an instrument rating skill, they would need to have the appropriate rating on their flight instructor certificate.

FAA Safety Briefing welcomes comments. We may edit letters for style and/or length. If we have more than one letter on a topic, we will select a representative letter to publish. Because of publishing schedule, responses may not appear for several issues. While we do not print anonymous letters, we will withhold names or send personal replies upon request. If you have a concern with an immediate FAA operational issue, contact your local Flight Standards District Office or air traffic facility. Send letters to: Editor, FAA Safety Briefing, AFS-850, 55 M Street, SE, Washington, DC 20003-3522, or e-mail SafetyBriefing@faa.gov.

Let us hear from you — comments, suggestions, and questions: email SafetyBriefing@faa.gov or use a smartphone QR reader to go “VFR-direct” to our mailbox. You can also reach us on Twitter @FAASafetyBrief or on Facebook — facebook.com/FAA.



What Exactly is the FAA's Role?

I don't like to repeat myself, but in view of the theme for this year-closing issue of *FAA Safety Briefing*, it seems appropriate to update a piece I first wrote in 2009. I've now been with the FAA — and with the Flight Standards Service — for more than a dozen years. Although the process of planning and writing for this magazine does provide a wider view of the incredible range of FAA responsibilities and activities, I don't claim to have a handle on all the functions performed by the agency's 47,000 employees. For the GA community, though, I can summarize the role of the Flight Standards Service and other parts of the FAA's Aviation Safety Organization in terms of three interlocking functions: setting standards, issuing certification on the basis of those standards, and ensuring continued operational safety.

Standards

The FAA creates and, as necessary, amends rules and regulations that provide the safety standards for people, organizations, and equipment operating in the National Airspace System (NAS). You might be most familiar with the standards (rules) for airman certification, as outlined in Title 14 Code of Federal Regulations (14 CFR) part 61 and, with the advent of the small UAS (sUAS) regulations, part 107 standards for the new remote pilot certificate. The Airman Certification Standards (ACS) and the Practical Test Standards (PTS) are “regulatory support” documents that explain implementation of these standards.

For aircraft and their associated parts, products, and appliances, the standards are set through regulations like 14 CFR part 23 (Airworthiness Standards: Normal, Utility, Acrobatic, And Commuter Category Airplanes) and part 43 (Maintenance, Preventive Maintenance, Rebuilding, and Alteration), and described in documents like the Type Certificate Data Sheet (TCDS), Supplemental Type Certificate (STC), and Technical Standard Orders (TSOs).

As you probably know, the FAA has spent the past few years working to update part 23 and is nearing completion of this important effort. The FAA is also hard at work developing the standards for third class medical reform as directed by Congress.

Certification

On the basis of established standards, the FAA issues and renews certificates that authorize people,

organizations, and equipment to operate in the NAS. Your pilot certificate(s) and ratings are issued to certify that you meet the standards set out in regulations like 14 CFR part 61. Operators like part 141 pilot schools have FAA certificates, as do air carriers.

The FAA also issues and renews certificates that allow manufacturers to build airframes, engines, propellers, components, and parts as well as the certificates that authorize organizations to provide maintenance services.

The process for obtaining certification can be complex, especially for commercial operators like air carriers. That's because they have to demonstrate to the FAA — in considerable detail — exactly how they will comply with all applicable regulations.

Continued Operational Safety

Continued Operational Safety (COS) is actually the largest of the three core functions. The goal is clear: the FAA's COS activities ensure that existing certificate holders continue to meet the safety requirements, standards, and regulations that formed the basis for their original certificate or certificate renewal.

The FAA accomplishes this responsibility through safety surveillance and oversight programs, audits, evaluations, air traffic safety oversight, education and training, research, and accident/incident investigation. The new Compliance Philosophy, the enabling guidance for the Administrator's Risk-based Decision-making approach, and Safety Management Systems (SMS) are all aimed at the COS function.

COS is also intended to ensure the integrity of a product throughout its service life. COS thus involves problem prevention, service monitoring, and corrective actions. All these actions cycle back into modification of standards, whether for pilot/mechanic certification, for a product's design and production, and for things like STCs and airworthiness directives (ADs).

Complicated? Yes. Complex? Definitely. But that's what it takes to maintain the world's safest airspace system — and we are working hard to keep it that way.

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. She is an active general aviation pilot and flight instructor.

Paul Greer

Attorney, Airworthiness Law Branch



Paul Greer is no stranger to aviation. Living close to the now closed Zahn's Airport on Long Island — once the busiest general aviation airfield in the U.S. — and John F. Kennedy International Airport, sparked his desire to fly at a young age.

"I was one of those kids who soloed at 16 and got his pilot certificate at 17," explains Greer. "It really was a different time. I took my first lessons in a J-3 Cub at Zahn's. Taking off on a warm spring day with the door open, the sound of 65 horses pulling you skyward, and the smell of avgas everywhere was something I'll never forget."

Paul worked as a short order cook making \$2 an hour to pay for his flying lessons. After high school as a West Point cadet, he pursued his passion at the Academy's flying club.

"As plebes we couldn't leave post except to participate in off post club activities," he notes. "I remember taking a few of my 'beanhead' (an endearing term for newly admitted cadets) friends with me to Stewart Airfield and flying down to Zahn's to visit with my parents, and go to Jones Beach. I wasn't sure if that was truly legal, but we never got caught!" And no, that's not his current legal test for actions he is asked to review.

After his time with the Army and earning his law degree, Paul was hired by an aviation consulting firm and did work for the FAA as well as corporate clients. "I had worked with a number of regulatory attorneys in the FAA's Office of the Chief Counsel, and I thought it would be an interesting place to work, as it combined both my interests in aviation and law." So he applied. Paul has been an attorney with the FAA for 18 years now.

As part of the agency's regulatory division in the Office of the Chief Counsel, Paul provides legal advice to FAA personnel regarding the drafting, form, and legality of regulations, orders, exemptions, and airspace actions. He also interprets the FAA's regulations, which are available online at <http://bit.ly/2bc4IdC>.

"Basically, if a regulation affects the GA community in any way, we'll see it in our office."

One of the biggest challenges his office faces is finding the regulatory "sweet spot." Finding that regulatory mix where you have just enough regulation to ensure that people don't get hurt, yet ensuring that the regulations don't stifle innovation or keep citizens from readily exercising their freedom to fly can be a difficult task.

"One of the things people may not realize is that my office not only helps other FAA offices ensure that legally sufficient regulatory proposals see their way into the Code of Federal Regulations, but we also review significant FAA policy and guidance," he notes. "As you read our proposals, regulations, and guidance you'd be surprised, and perhaps even grateful, at the contributions my office has made."

To become more familiar with the agency's rulemaking and exemption procedures, Paul suggests pilots look at 14 CFR part 11. In addition to rules that can be waived under 14 CFR section 91.905, any person can request an exemption from FAA regulations — but pay special attention to section 11.81, and review how the FAA has treated similar requests by searching the exemption database at <http://aes.faa.gov>.

From a legal standpoint, Paul has some parting advice: don't be afraid to ask questions.

"Just be sure you get an answer from a reputable source. Not everything you read in aviation blogs is true, regardless of what their authors may say. There's a tremendous amount of information available from the FAA, and someone else has very likely asked the same question you have." If in doubt, start at faa.gov.

Paul Cianciolo is an assistant editor and the social media lead for FAA Safety Briefing. He is a U.S. Air Force veteran, and a rated aircrew member and public affairs officer with the Civil Air Patrol.



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