CARLTON FIELDS

New Federal Drone Regulations Leave Unanswered Questions

August 08, 2016

The Federal Aviation Administration Extension, Safety, and Security Act of 2016 ("FAA Reauthorization") was signed into law July 15. The FAA Reauthorization contained at least five sections directed specifically at unmanned aerial systems ("UAS" or "drones"). This follows the June release of the widely anticipated Part 107 by the FAA governing the commercial use of drones, which takes effect this month. While many say the new FAA rules facilitate commercial drone operation, with the exception of the new operator certification, they closely track the existing exceptions available for commercial UAS operation. The new regulation creates very few "new" opportunities. Part 107 mostly teases businesses with the possibility of commercial drone use but still prohibits most of the capabilities necessary to fully enable it in the United States. An FAA summary of the new regulation is available here. The very existence of the FAA Reauthorization's drone sections implicitly concedes the inadequacy of Part 107, with its inability to offer the commercial drone industry meaningful legislative directives for drone safety, security, and operation. These new sections provide none of the additional regulation, permissions, or guidance lacking in Part 107. To the contrary, the FAA makes it clear that Part 107, as released in June, is only a temporary measure. A summary of the UAS sections of the FAA Reauthorization is provided at the end of this article. A few of the relevant prohibitions of Part 107 are below. **Restrictions and Requirements Under Part 107** Prohibited Operations As more businesses enter the commercial UAS landscape, it is important to understand

what Part 107 permits and what it prohibits, as well as what is likely coming next. The following is a list of some prohibited operations:

- Beyond visual line of sight of the operator
- Higher than 400 feet above ground level unless within 400 feet of a structure
- During nighttime hours
- Aircraft over 55 pounds, including payload
- A single individual operating multiple UAS
- Operation directly over people not involved in operating the UAS
- Operation in weather conditions with less than three miles visibility
- Controlling a drone while in a moving vehicle or aircraft
- Payloads or equipment containing hazardous materials
- Careless or reckless operations

Commercial UAS operators may request FAA approval for a waiver of certain of these restrictions. **Reporting Requirements** UAS operators must also report to the FAA within 10 days any mishaps leading to serious injury, loss of consciousness, or property damage of at least $500. Given that many drones cost more than $500, mishap reporting may become a regular occurrence for commercial drone operators. **New Generation of Flyers** Perhaps the most significant impact of Part 107 is the elimination of the pilot's license requirement for commercial UAS operation. It was replaced with a new pilot certification called a "Remote Pilot in Command" (RPIC) certification. A RPIC certification is available for medically qualified individuals over the age of 16 who pass a certification exam. An individual must also be able to read, speak, write, and understand English to receive certification. RPIC certification also requires a background check. An online certification option is available for current pilot license holders. The RPIC certificate allows the commercial operation of a small UAS, which is defined as a drone weighing less than 55 pounds. An individual who lacks an RPIC certificate may operate a UAS if an RPIC-certified individual provides direct supervision. Beyond the RPIC provision, most of Part 107 simply codifies the typically granted exceptions for commercial uses available under Section 333 of the FAA Modernization and Reform Act of 2012. The new regulation eliminates the formality of applying for the exception. While this change arguably makes it easier for a business to begin drone operations, it highlights several issues not addressed in Part 107. **Privacy** Privacy is undoubtedly a main concern related to drone use. Privacy concerns will only increase as commercial drone use proliferates. The FAA has largely punted on the privacy issue, due at least to the fact the FAA does not regulate data gathering. However, the FAA has instituted a privacy education campaign, which will provide all drone users

with recommended privacy guidelines as part of the UAS registration process as well as through the FAA B4UFly mobile app. Additionally, the FAA has emphasized adherence to the privacy "best practices" published by the National Telecommunications and Information Administration in May. The Voluntary Best Practices for UAS Privacy, Transparency, and Accountability can be found here. These efforts will hardly soothe privacy concerns because there are currently no enforcement mechanisms beyond lawsuits, and in some states, criminal statutes. Further, Part 107 only applies to commercial operation. "Hobbyist" or recreational drones fall under the Special Rule for Model Aircraft ("Special Rule") and are currently "unregulated." The FAA publishes guidelines for recreational use here. Neither Part 107, nor the Special Rule, nor the FAA Reauthorization addresses UAS privacy concerns. In addition to ignoring privacy concerns, Part 107 does not address, much less prohibit, flights over private property. And unless the FAA expects people to only fly over public roads and parks, flight over private property is necessary for nearly any practical commercial drone use. While courts determined (in 1946) that military aircraft flying a mere 83 feet over private property constituted a government taking, no altitude delineated where private property's vertical extent ended. Instead, the language used was "immediate reaches of the enveloping atmosphere" and "a direct and immediate interference with the enjoyment and use of the land." Part 107 sets the altitude ceiling on UAS operation at 400 feet with an exception that flights may be conducted higher than 400 feet if the drone remains within 400 feet of a structure. If 83 feet is low enough to constitute a trespass on private property, and 401 feet is high enough to violate FAA regulations, are flights over private property limited to between approximately 100 and 400 feet? Further, there is no requirement for altimeters or GPS elevation displays for commercial drones, so how would a commercial operator be expected to know the difference between 83 feet and 100 feet, or any other elevation, by eyesight alone? There is simply no guidance for drone users' operations over private property and there are no prohibitions to protect private property owners. The confusion is somewhat reduced when the drone operator is a federal or state agency, thanks to the Fourth Amendment. Some states have attempted to address the lack of clarity with drone regulations that may ultimately conflict with FAA authority. **Preemption: Safety and Privacy** Some states, including Florida, have enacted their own drone regulations. However, certain subject matter, such as aviation safety, is preempted by federal legislation and the FAA, preventing the states from imposing their own safety regulations. Yet, the FAA declined to preempt any drone subject matter with Part 107, despite the urging of commercial and governmental interests. While drone safety is likely to be considered part of aviation safety, it raises some considerations not typically relevant to manned aviation, such as flying in close proximity to individuals and private property. Further, in many cases proximity and privacy issues overlap, blurring drone safety and privacy concerns. The FAA has expressly avoided articulating any privacy rules, yet aviation safety remains squarely under federal preemption. As to privacy, the FAA simply injected yet more confusion by stating "State law and other legal protections for individual privacy may provide recourse for a person whose privacy may be affected through another person's use of a UAS." While this statement effectively eliminates any notion of federal preemption on drone privacy, it does not clarify whether "state law and other legal protection" may extend to safety issues practically related to privacy concerns, such as flying too

close to a private residence. Florida, for example, passed an anti-surveillance statute aimed at drones. However, even if a state's drone privacy statute is not preempted by federal law or regulation, there may be First Amendment implications. While it is clear there is no FAA preemption for privacy, it is unclear if federal aviation safety preemption extends to drone safety, or even drones in general. This lack of a clear vision regarding safety and privacy enhances the risk that a patchwork regulatory scheme will develop with each state enacting various types of drone laws. This fear has made businesses reluctant to enter the drone industry. The new regulations have not quieted that fear—and may have exacerbated it. **Drone Cybersecurity** Drone issues related to the collection and protection of data, which include hacking and other digital piracy concerns, have not yet begun to evolve in earnest. It is currently unclear how authority for investigating drone hacking would be allocated at the federal level. For now, operators and private citizens must rely on existing state laws to set the privacy boundaries for drone use. Topics such as preemption and First Amendment defenses to privacy laws present philosophical and political questions that will only surface when someone finally takes legal action that reaches a high court of appeal, or even the U.S. Supreme Court. There are, however, topics within the new regulation that have much more practical application. **Heads Up – Line of Sight Limitations and Considerations** The new regulation includes a "line of sight" (LOS) restriction, which was included in most Section 333 exceptions as well as the Special Rule guidelines. This means drone operators must be in visual contact with their drone. Many in the UAS industry were closely watching how the new regulation might address an operational mode commonly known as first-person view (FPV) flying. An FPV operational mode involves controlling the flight of a UAS-based on a video feed instead of through the operator's direct visual contact. FPV flying has generally been disallowed under existing exceptions and many observers were concerned that FPV flying would be banned under Part 107. Instead, Part 107 allows FPV flying as long as the "see and avoid" safety requirement "is satisfied in other ways." The "other ways" language almost seems to suggest "see and avoid" systems may include traffic collision avoidance system and airborne collision avoidance system capabilities. Further, portions of the FAA reauthorization that direct the development of a UAS traffic management system support this view. However, to reliably employ such traffic systems on UAS, some degree of autonomy and FPV capability is likely a practical necessity. The new regulation expressly prohibits autonomous operation, but does not define "autonomous operation." The FAA reauthorization is silent on any aspects of autonomous capabilities. These are impactful restrictions, because for commercial drone use to become practical and widespread, which was the entire point of Part 107's release, permitted operational ranges beyond LOS distances will be necessary. For example, using a drone to inspect power lines provides no benefit if the drone operators must drive within visual distance of the lines being inspected. To enable operational ranges further than a LOS distance, reliable autonomous systems (such as return to base fail safes), reliable long range data connections, and reliable FPV operational modes will be required. However, Part 107 regulations prohibit beyond line of sight (BLOS) operations and most of the capabilities necessary to perform them. Significantly, this very concept was addressed in the FAA Reauthorization, which creates a specific exception permitting BLOS operation for activities related to "critical infrastructure" or responding to natural disasters

and emergencies. The FAA itself is aware of the practical limitations and has initiated programs to evaluate larger operating ranges for commercial drones, such as the Pathfinder Initiative, a collaborative research and development effort between the FAA and industry to enable UAS/drone operation outside of the current restrictions. In particular, Pathfinder Focus Area Two, in partnership with private vendors, is focused on understanding the factors affecting safety in Extended Visual Line of Sight operations (EVLOS). EVLOS is defined as flight of a UAS or drone outside the visual range of the pilot in command (PIC), but still within visual range of the pilot to ensure cognizance of the area of operation and encroaching aircraft. The Pathfinder results are expected to have a direct and near-term impact on the FAA's regulatory stance toward UAS operation in the United States. The FAA Reauthorization seems to suggest that regulatory stance will soon broaden the permitted operational aspects. Importantly, these capabilities are essential for large-scale commercial drone projects, such as Amazon Prime Air. **On Your Doorstep – External Loads** Proponents of drone delivery are one segment of the UAS industry with a particular interest in FPV, BLOS, and autonomous flying. While these flight operations are not currently authorized under Part 107, the new rules permit "external load operations" if the object is securely attached and does not adversely affect flight characteristics. Somewhat surprisingly, UAS transportation for hire is also permitted, provided the operational requirements are met and the operation does not cross state lines. While most of these capabilities will remain dormant until the restrictions are modified, it is likely at least some businesses may attempt to get a head start and provide delivery or transport options within the existing Part 107 restrictions, or through a small scale waiver. These pioneers, both in drone delivery and other commercial exploits, are likely to face another hot industry topic, which was not addressed in the new regulation, or the FAA Reauthorization: insurance. **Insurance** As with any aerospace operation, insurance is an integral part of risk management and essential for legitimate large-scale commercial operations. While the regulatory situation continues to evolve, the subject of insurance is increasingly important within the UAS industry. While neither Part 107 nor the FAA Reauthorization mentioned insurance requirements, any commercial UAV operator should assume that their customers and partners will eventually require them to certify they are insured, and many commercial drone operators may want to purchase insurance for legal liability, and to protect their assets. Further, minimum insurance requirements may eventually come from state laws or regulations. Insurance may also be advised, or even required, in the future when a drone is operated on a Part 107 waiver, or operated with capabilities within the gray areas of FAA regulation, such as semi-autonomous flying. **Conclusion** Even after Part 107 takes effect this month, there will be considerable confusion about "how" and "when" you can fly drones for commercial purposes, and how drones can be used in various industries. As such, it will be essential for businesses to stay updated on the evolution of drone regulations, and consult with counsel. **Summary of FAA Reauthorization UAS Sections.** Full text available here.

- Sec. 2002. Identification Standards. This section mandates the development of what amounts to a UAS tracking system and database. This database will be used to identify operators and other information of specific UAS.

- Sec. 2203. Safety Statements. This section requires manufacturers of small UAS to provide to their customers a safety statement with information about the laws and regulations applicable to small UAS. Failure to provide the safety statement is punishable by penalties of up to $27,500 per violation.
- Sec. 2205. Interference with wildfire suppression, law enforcement, or emergency response effort by operation of unmanned aircraft. This section imposes a fine of up to $20,000 for a UAS operator that “knowingly or recklessly interferes with a wildfire suppression, law enforcement, or emergency response.”
- Sec. 2207. Emergency exemption process. This section requires FAA to create an expedited process for approving exceptions and certificates of authorizations (COAs) in response to catastrophes, disasters, or other emergencies. This includes exemptions or COAs for BLOS or nighttime operations.
- Sec. 2208. Unmanned aircraft systems traffic management. This section requires the joint development by FAA and NASA of a UAS traffic management system within six months of enactment. This UAS traffic management system will be integrated with the manned air traffic control system.
- Sec. 2209. Applications for designation. This section requires creation of an application process for the designation of UAS restricted facilities. The process will field requests for such a designation to “prohibit or restrict the operation of an unmanned aircraft in close proximity” to a critical infrastructure facility. Current requirements mandate that UAS operators comply with Notices to Airmen (NOTAMs) which protect the airspace over and near some of these types of facilities.

Authored By

Bruce J. Berman

Related Practices

Aviation
Cybersecurity and Privacy
Intellectual Property
Technology

Related Industries

Technology