mall unmanned aircraft systems (sUAS) seem to be ubiquitous. Rapid technological improvements and remarkable affordability are driving a growing demand to use sUAS in a wide variety of applications. As with many other technological innovations, regulation of these devices lags far behind their capabilities and availability. A Wild West of unregulated sUAS use is quickly disappearing in part because prospective commercial users, in particular, demand a straightforward legal framework for operating sUAS. The FAA recently published a notice of proposed rulemaking (NPRM) to begin establishing just such a framework, as mandated by section 333 of the FAA Modernization and Reform Act of 2012 (FMRA). As the FAA typically does in other contexts, it also has issued guidance further defining its approach to regulating sUAS operations.

The NPRM addresses commercial UAS operators, or, as phrased in the NPRM, “non-hobby, non-recreational” users. This distinction between commercial and recreational uses of sUAS is statutorily mandated in the FMRA, which prohibits the FAA from regulating model aircraft, even though model aircraft and commercially operated sUAS may be physically indistinguishable. In essence, the NPRM regulates based upon the purpose of the use, rather than the type of aircraft. While the FAA is comfortable making such a distinction (e.g., a Boeing 737 is regulated differently if operated by an airline rather than for private purposes), the intent-based distinction poses unique problems in this context. In particular, the statutory distinction raises enforcement difficulties because it is predicated on the identity of the operator and his or her purpose for flying. And, unlike traditional piloted aircraft, which are always subject to some degree of FAA regulation, regardless of use, some uses of sUAS (i.e., when they are categorized as “model aircraft”) are to be essentially unregulated by the FAA. The FAA stresses that it retains enforcement powers against any person, a model aircraft operator included, who engages in careless or reckless operations that endanger any persons or property on the ground or the National Airspace System (NAS). In the absence of a regulatory framework and enforcement resources, however, that residual authority is not likely to result in any meaningful regulation of sport or recreational use of sUAS.

Somewhat ironically, many of the practical and regulatory challenges associated with regulation of sUAS arise precisely because sUAS are best suited for operation in areas not traditionally associated with aeronautical pursuits:

- They can be launched and landed anywhere, so they do not require airports for their operations;
- The size and operability of sUAS allow them to fly in locations that are inaccessible to manned aircraft; and
- The FAA’s proposed requirements generally separate sUAS spatially from manned aircraft by limiting sUAS flights to altitudes below 500 feet above ground level (AGL), in the zone closest to other human activity.

The low cost and out-of-the-box accessibility of sUAS make the devices readily available to purchasers who may have limited knowledge of the general obligation to conduct safe operations. sUAS have already been involved in potentially hazardous interactions with other flight operations and individuals on the ground, including near-collisions at altitudes above sUAS permitted range with aircraft landing at commercial airports and an incident in which a homeowner shot down an sUAS he believed was intruding on the airspace above his property. While the NPRM is pending, the FAA emphasizes that the prohibition against careless or reckless conduct endangering the NAS applies to all persons and is not limited to authorized aircraft operators, and that the FAA retains jurisdiction generally to ensure the safety of the NAS. Toward this end, as discussed below, the FAA has issued guidance to local law enforcement agencies to clarify the scope and nature of actions local police may take to aid in the FAA’s enforcement of NAS safety.

Airport proprietors face new issues regarding the nature of sUAS operations and the extent to which a proprietor must accommodate or may regulate such uses on and near airport property. States and local governments are determining both how they may use sUAS for police, public safety, and other purposes and what latitude they have to regulate the use of sUAS within their borders. This article focuses on these aspects of sUAS use and proposed regulation.
Accommodation of sUAS Operations at Airports

The NPRM generally requires sUAS operations to remain separated from those of other aircraft but permits the operation of sUAS with the permission of the relevant air traffic control (ATC) facility within Class B, Class C, and Class D airspace, and in Class E airspace designated for an airport. In addition, sUAS may operate without ATC authorization in Class G airspace and in Class E airspace outside ATC jurisdiction. In all cases, sUAS operations are limited to daylight hours within visual line of sight of the operator, at an altitude not exceeding 500 feet AGL, and sUAS must yield right-of-way to other aircraft. As a result, airport proprietors must be prepared to consider requests from sUAS operators to fly within airspace controlled by ATC even if they may not be required to accommodate sUAS takeoff and landing operations at the airport facility itself.

Airport proprietors are authorized to adopt and enforce rules and regulations reasonably necessary to protect public health, safety, and welfare. However, an airport’s discretion to regulate operations on its property is unique and limited. FAA funding agreements with an airport contain grant assurances imposing conditions that must be satisfied to preserve the proprietor’s grant eligibility, and federal aviation law imposes additional limits on the proprietor’s ability to restrict uses on airport property.

A basic principle underlying the FAAs grant assurance obligations is that airport proprietors must accommodate all types, kinds, and classes of aeronautical activity and that a proprietor must make the airport “available for public use on reasonable conditions and without unjust discrimination.” An aeronautical activity is one “that involves, makes possible, or is required for the operation of aircraft or that contributes to or is required for the safety of such operations,” or has a direct relationship to the operation of aircraft.

Because sUAS can be operated virtually anywhere and do not require airport infrastructure for their operations (the standard that the FAA usually uses for defining whether an activity is aeronautical), an airport proprietor arguably would not be required to accommodate sUAS operations. Further, as the NPRM proposes, sUAS operators require ATC authorization to operate within airspace under ATC control, which constrains sUAS flight on or near an airport to a greater degree than in virtually all other locations. Taken together, these factors suggest that there may be no requirement for an airport proprietor to accommodate sUAS operations as an aeronautical activity. Of course, that would not preclude a proprietor from providing facilities for sUAS voluntarily, subject to whatever restrictions the FAA ultimately adopts. Access to airports by sUAS has not been litigated, however, and the FAA has not issued guidance as to whether sUAS operations constitute an aeronautical activity that airports must accommodate. As the regulatory landscape evolves and sUAS use proliferates, this issue is likely to be subject to highly fact-specific analysis concerning related services, such as sUAS repair facilities or sUAS landing areas, which may be present on airport property.

State and Local Discretion to Regulate sUAS

State and local bodies are uniquely positioned because they not only may use sUAS for a variety of purposes that enhance public safety and welfare but also have an interest in regulating sUAS to protect the privacy of individual citizens or the security of specific government facilities. They also have law enforcement personnel on the ground that may be better positioned to regulate sUAS use than federal law enforcement agencies. Police forces have been among the first public agencies to use sUAS for surveillance, traffic enforcement, and monitoring purposes, but sUAS are increasingly also being used for zoning investigation and enforcement, search-and-rescue operations, monitoring of emergencies such as wildfires or floods, natural resources surveys, and public utility inspections.

It is well established that state or local attempts to regulate aviation safety or operations are preempted by federal law. Because of the congressional mandate that the FAA is responsible for ensuring the safety of the NAS, local governments’ authority to regulate sUAS may be limited. Whether a state or local law impermissibly regulates sUAS operations (as distinct from safety) may be the next battleground over the demarcation between federal and state or local authority. State and local legislation to date has largely avoided any attempt to regulate sUAS safety, and the FAA has indicated it does not intend to seek to regulate the effect of sUAS use on privacy. However, state or locally imposed limits on where sUAS may operate may be found to intrude on the FAA’s authority to regulate sUAS operations, depending, as always, on the specific facts and circumstances at issue. The question has yet to be litigated.

In 2014, 35 states considered some form of legislation concerning UAS, and 10 states enacted laws, primarily to limit the use of UAS by law enforcement. Typical measures limit the use of UAS by public entities or their contractors to collect information without a warrant or to perform traffic enforcement. Many U.S. municipalities and cities also have proposed ordinances to regulate UAS operations. As with state legislation to date, most focus on protecting the privacy of individuals against intrusions from UAS. The focus has primarily, but not exclusively, been on UAS operations by government entities. Municipalities may be motivated to regulate to protect their citizens’ privacy in response to FAA statements that it does not intend to promulgate specific privacy rules as it implements the FMRA. For example, mirroring state legislative efforts, Charlottesville, Virginia; Iowa City, Iowa; and St. Bonifacius, Minnesota, have adopted measures limiting or prohibiting the use of UAS by government agencies to conduct surveillance without
a warrant or for traffic enforcement.\textsuperscript{16}

As with many sUAS-related issues, these legislative efforts have yet to be tested in litigation, so the permissible reach of state or local legislation to regulate sUAS has not been definitively established. Measures to protect the privacy of individual citizens will likely be tested in litigation against existing standards defining a reasonable expectation of privacy. Although the use of sUAS to intrude on privacy may be novel today, determining the effect of such an intrusion will be subject to a well-established analytical framework.\textsuperscript{17} If municipalities seek to define, through measures resembling zoning enforcement, specific classes of areas within which sUAS cannot operate, litigation to determine whether such regulation would be preempted by the FAA's regulation of aircraft operations is likely to ensue.

Local Law Enforcement Agencies—
The FAA's Deputies?

In January 2015, the FAA issued guidance to state and local law enforcement agencies (LEAs) to help stop unauthorized or unsafe UAS operations (LEA Guidance).\textsuperscript{18} The FAA seeks a “partnership” with local law enforcement agencies that, according to the FAA, are in “the best position to deter, detect, immediately investigate, and, as appropriate, pursue enforcement actions to stop unauthorized or unsafe UAS operations.”\textsuperscript{19} The LEA Guidance outlines the FAA's mandate to keep the NAS safe and the requirement that all aircraft, including model aircraft not directly regulated by the FAA, must be operated safely. It then encourages LEAs to apply any laws within their enforcement authority to stop unauthorized UAS operations. The LEA Guidance is directed at both sUAS and model aircraft operations, to which it refers collectively as “UAS operations.”

The FAA identifies the following activities as being within the scope of state and local law enforcement powers:

- Witness identification and interviews;
- Identification of operators;
- Viewing and recording the location of the event;
- Identifying sensitive locations, events, or activities;
- Notification to FAA Regional Operation Centers; and
- Evidence collection.\textsuperscript{20}

The FAA maintains that it does not seek to mix criminal law enforcement with the FAA's civil administrative safety enforcement role, but essentially proposed to do just that when it described the role it expects for LEAs, claiming that “the public interest is best served by coordination and fostering mutual understanding and cooperation between governmental entities with law enforcement responsibilities” and that “successful enforcement will depend on development of a complete and accurate factual report contemporaneous with the event.”\textsuperscript{21} The FAA admonishes UAS operators and LEAs to be familiar with all relevant airspace restrictions, including special time-limited restrictions, a charge that is reasonable to expect of sUAS operators, but one that could be difficult for an LEA to understand unless the LEA is an agency of a local government that also operates an airport.

While a detailed analysis of the issues the LEA Guidance raises is beyond the scope of this article, the tensions between local law enforcement and the Transportation Security Administration in the early 2000s demonstrate that the line between federal and local authority is poorly understood, especially by local law enforcement. The preemptive enforcement the FAA appears to expect of LEAs (in the LEA Guidance) raises a variety of issues relating to the potential conflict between criminal and civil investigative authority, search and seizure of private property, protection of privacy, probable cause, and the latitude of the LEA to act in response to a potential safety issue absent any apparent criminal violation. These are all issues that likely will be explored and resolved in coming years.

The LEA Guidance is nonbinding, and the FAA has no authority to compel or direct LEA activity. Thus, it is not clear how a LEA might respond to a request from a concerned citizen alleging a violation involving a UAS. Although local regulation of areas within the FAA's jurisdiction is preempted, citizen complainants and LEAs responding in the moment to an incident involving an sUAS (such as allegations of trespass by an sUAS hovering at very low altitudes above private property) are unlikely to appreciate the line between federal and local authority. The very characteristics that make sUAS appealing to commercial and recreational users (in whose hands they are most likely deemed model aircraft) also ensure that situations involving LEAs will soon become numerous. The interaction of the local and federal enforcement realms will be heavily influenced by the specific facts and enforcement context of each incident. The LEA Guidance is just the first foray into the necessary dialogue between the FAA and LEAs about the most effective ways to enforce local and federal laws with respect to sUAS operations.

Conclusion

We have entered a period of technical and legal change as sUAS become an increasing part of our daily lives. In some cases, the devices are novel, but the relevant legal principles are well-established (e.g., where an alleged invasion of privacy occurs). In other areas, establishing the best means to integrate sUAS into the NAS and permit their use in the flow of commercial life require fundamental reconsideration of established norms and practices. The NPRM and LEA Guidance are the FAA's first attempts to grapple with these questions and strike a balance between the competing demands of different stakeholders.

Endnotes

1. Operation and Certification of Small Unmanned


3. FAA Modernization and Reform Act of 2012 (FMRA), Pub. L. No. 112-95, § 336(a). The NPRM effectively codifies guidelines for model aircraft operations articulated in Advisory Circular 91-57 (1981), with which operators are currently encouraged, but not obligated, to comply. 80 Fed. Reg. at 9585 (introducing regulatory language for amendments to 14 CFR Part 101 addressing model aircraft). Section 336 of FMRA prohibits the FAA from regulating aircraft and operations that meet the statute’s “model aircraft” definition, but FAA nevertheless retains the authority to pursue enforcement against any person, including a model aircraft operator, who endangers the safety of the NAS. Id. at 9555; see also Interpretation of the Special Rule for Model Aircraft, 79 Fed. Reg. 36,172 (June 25, 2014).


8. The FAA encourages sUAS operators seeking to operate within controlled airspace to enter into a written agreement with the ATC facility having jurisdiction. Id. at 9564–65.

9. See, e.g., Nat’l Helicopter Corp. v. City of New York, 137 F.3d 81, 89 (2d Cir. 1998) (“As a proprietor, the City, as noted, has the power to promulgate reasonable, nonarbitrary and non-discriminatory regulations” of such matters as noise and other environmental concerns); FAA Order 5190.6 B, §§ 11.5–11.7 (Sept. 30, 2009) (listing examples of “reasonable” rules and regulations and generally stating airport owner “is under no obligation to permit aircraft owners to introduce onto the airport any equipment, personnel or practices which would be unsafe, unsightly, detrimental to the public welfare, or that would affect the efficient use of airport facilities by others”).


12. FED. AVIATION ADMIN., ADVISORY CIRCULAR AC 150/5190-7, app. 1, § 1.1(a) (Aug. 28, 2006).

13. 49 U.S.C. § 40103(a)(1); Abdullah v. Am. Airlines, Inc., 181 F.3d 363, 370 (3d Cir. 1999) (finding intent of Congress was to regulate aviation safety at the federal level and federal law therefore preempts the general field of aviation safety); City of Burbank v. Lockheed Air Terminal, Inc., 411 U.S. 624, 633–34 (1973) (holding local requirements that affect aircraft operations generally are preempted, especially (but not necessarily only) if those matters are the subject of specific FAA regulations).


15. USDOT JOINT PLANNING & DEV. OFFICE, UNMANNED AIRCRAFT SYSTEMS (UAS) COMPREHENSIVE PLAN 7 (Sept. 2013) (“Although there is no Federal law that specifically addresses privacy concerns with respect to civil UAS operations, many states have laws that protect individuals from invasions of privacy which could be applied to intrusions committed by using a UAS.”).


19. Id. at 1.

20. Id. at 5–6.

21. Id. at 5.