



# Law Enforcement Guidance Concerning Suspected Unauthorized UAS Operations

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WHITE PAPER

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## Introduction

Unmanned Aircraft Systems (UAS), commonly referred to as drones by the media and public at large, are becoming more common in the skies above the U.S. and around the world. While initial awareness of this technology concentrated mostly on U.S. Department of Defense (DoD) operations in various war theaters, public concerns for the use of UAS has steadily increased over the past decade. Today, the public's concerns have sharply focused on domestic UAS operations by the government, including federal, state and local law enforcement agencies around the country.

At the same time, the agency responsible for ensuring the safety of U.S. air transportation, the Federal Aviation Administration (FAA), has become increasingly concerned about the rapid proliferation of small UAS throughout most communities. There is evidence of a significant increase in civilian use of small, inexpensive UAS by people and businesses that traditionally did not comply with FAA requirements.

The FAA has recently published new regulations permitting the operation of civil small UAS (sUAS). The new regulations do not require an airworthiness certification for the UAS but do require the operator to have a remote pilot certificate issued by the FAA. Also, UAS technologies need to be registered with the FAA and display the registration number (N-number) on the aircraft. Despite these new rules, there is an escalating threat of unauthorized or "illegal" UAS flights that continue to pique the FAA and federal, state and local law enforcement agencies' attention and concerns for public safety, in the air as well as on the ground. This rapid proliferation of small UAS technologies has even escalated concerns about our national security. This white paper is intended to offer high-level guidance to law enforcement agencies on how to assess UAS operations within their jurisdictions and suggest actions to interdict and mitigate unauthorized, illegal or risky operations.

## Issue

As recognized by the FAA, "there is evidence of a considerable increase in the unauthorized use of small, inexpensive Unmanned Aircraft Systems (UAS) by individuals and organizations, including companies." While the FAA's Title 49 responsibilities include the enforcement of the Title 14 Code of Federal Regulations (commonly referred to as the Federal Aviation Regulations, or FARs), that agency also acknowledges that law enforcement officers (LEOs) are typically the first ones to discover illegal UAS operations and are therefore best positioned to interdict, investigate and prosecute as appropriate, offenders for their violations. The challenges for federal, state and local law enforcement are: 1) distinguish between lawful, authorized UAS operations that do not pose a risk to the public, and those that are not authorized or lawful and may pose a risk; 2) interdict and investigate unauthorized or unlawful UAS flights; and 3) detect and interdict possible nefarious UAS operations (i.e., terrorist plots, intelligence gathering, threats to national security, etc.).

These challenges are further exacerbated by the dilemma confronting LEOs and their agencies regarding how, and under what statutory authorities, do they intervene when they suspect unauthorized UAS operations/operators. The information herein is not a comprehensive, final solution to these issues. It is offered to educate law enforcement agencies (LEAs) and LEOs, stimulate thoughtful process development and implementation regarding the interdiction and possible prosecution of unauthorized operations, and to cultivate and support a maturing partnership between the FAA and LEAs in addressing these unlawful UAS activities.

## Overview

The FAA defines a UAS as a system which encompasses the unmanned aircraft (UA) itself and all of the associated system



elements (i.e., the control station, the command and control (C2) data links, and the pilot(s) or operators). It should be understood that a UAS is merely a platform for a particular sensor package suited for a particular mission. That sensor package has its own telemetry, recording capability, etc.

The UA is the flying portion of the system. It may be flown by a pilot via a ground control system, or it can operate autonomously via a preprogramed trajectory and flight path through use of an on-board computer and GPS navigation equipment. With the impressive development of technology and the lowering cost of components, the unique aspects of a UAS are no longer limited to expensive systems operated by DoD.

For the past 30 or more years, the typical hobbyist would fly a simple radio controlled (RC) aircraft that they would normally build themselves. These early RC aircraft took time to build and learn how to fly, and usually required enough open space, free of obstacles and people, to launch, fly and land. These were always regarded as recreational activities to enjoy the fun of the RC hobby.

Today, small UAS technologies are evolving very rapidly and becoming increasingly sophisticated with respect to navigation capability, communications and flight control systems. These developments are making them easier to operate (fly) and more reliable than earlier, simple, radio controlled model aircraft. Anyone can purchase a vertical takeoff and landing (VTOL) remote controlled rotorcraft with a camera from the hobby store or online. Within a few hours they can be flying over a neighborhood taking pictures. Many of these “toys” can be purchased for less than \$1,000. This means that nearly anyone can acquire and fly a small UA with little or no experience or training, making them highly desirable for exploiting various commercial activities.

A UAS has the ability to take off and land in a confined space, including from rooftops, balconies, roads, parking lots, pickup truck beds and backyards. Most of the popular consumer-grade technologies are multi-rotor, battery-powered systems (i.e., four, five, six or even eight rotors). Typical endurance for these devices can range from 10 minutes to 45 minutes. The

electric motor propulsion systems for these technologies result in a very low noise signature. Most of these devices have a total diameter, or footprint, of less than 3 feet. At 30 feet in the air, a small electric UAS is barely noticeable.

Most systems have internal flight control and stabilization systems, making them easy to fly right out of the box. Most of them also incorporate GPS positioning systems so that the UAS can hover in one location without the need for control inputs.

With WiFi capable video cameras, such as the GoPro, the operator can easily obtain high-quality, real-time video. UAS can also have attachments for cargo and the ability to remotely release the cargo while in flight.

The typical consumer UAS is operated by a hand-held digital radio control box, but technology is advancing and today, many of these technologies can be operated with a simple cellphone. Most of these technologies have effective ranges out to a few miles.

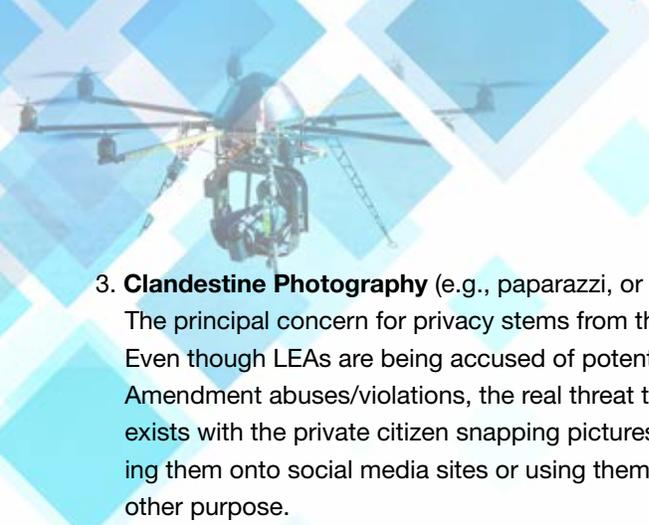
Clearly, RC flying has evolved well beyond the mere enjoyment of a hobby for recreational flying. This increasing consumer market for small UAS presents a number of public safety and national security concerns, some of which are presented below.

- 1. Risk of Physical Injury.** A VTOL UAS can launch and land in a confined area, such as a parking lot, at an outdoor concert or in public parks. In August 2013, a civilian operated UAS crashed into the spectator stands at Virginia Motor-sports Park, injuring four to five spectators.<sup>1</sup> In December 2014, TGI Friday launched a promotion called “Mobile Mistletoe” to fly mistletoe over couples at the restaurant. The UAS lost control and clipped a photographer in the nose, cutting the tip of her nose and chin.<sup>2</sup>
- 2. Transport of Illegal Substances.** UAS have the ability to carry objects, typically cameras. However, with the ability to carry payloads, consumer purchased UAS can carry packages and have the ability to drop them remotely. In January 2015, a UAS carrying 3 pounds of methamphetamine crashed on the U.S.-Mexico Border.<sup>3</sup>

<sup>1</sup> <http://www.theblaze.com/stories/2013/08/26/drone-crash-caused-more-injuries-at-great-bull-run-than-bulls/>

<sup>2</sup> [http://www.brooklyndaily.com/stories/2014/50/bn-drone-disaster-at-tgifridays-2014-12-12-bk\\_2014\\_50.html](http://www.brooklyndaily.com/stories/2014/50/bn-drone-disaster-at-tgifridays-2014-12-12-bk_2014_50.html)

<sup>3</sup> <http://www.cnn.com/2015/01/22/world/drug-drone-crashes-us-mexico-border/>



3. **Clandestine Photography** (e.g., paparazzi, or others).  
The principal concern for privacy stems from this element. Even though LEAs are being accused of potential Fourth Amendment abuses/violations, the real threat to privacy exists with the private citizen snapping pictures and posting them onto social media sites or using them for some other purpose.
4. **Photograph of Sensitive Infrastructure** (national security concerns). UAS provide civilians with the ability to capture high-resolution aerial photographs without the use of expensive or relatively restricted manned aircraft. In France, in November 2014, three individuals were arrested after using a UAS to photograph a nuclear plant.<sup>4</sup> In Connecticut, in May 2013, a UAS operated by a Chinese national flew over a power plant taking photographs and then crashed the UAS.<sup>5</sup> The most alarming use of a UAS over sensitive infrastructure was the January 2015 report of a UAS found on the grounds of the White House.<sup>6</sup>
5. **Counter-Surveillance.** While we have not seen any publicly available reports, the law enforcement community is becoming increasingly aware that UAS can be used for counter-surveillance. For example, a UAS can detect law enforcement in the vicinity of an illegal transaction, such as monitoring the access points for known drug trafficking areas. There was even a rumor reported as a small UAS conducting surveillance against a police department in California.
6. **Terrorist Activities and Threats to National Security.** It is not unreasonable to expect that terrorists could plan a serious attack using one of these small UAS technologies to carry a chemical or biological agent such as sarin or anthrax or other harmful agents, and deploy them remotely. They might even carry a small explosive device. (See item 2 above).

These are only a few examples that LEAs may confront in the near future as this technology and its availability increase throughout the country. Federal, state and local law enforcement agencies must begin to consider, develop and implement appropriate strategies to address these growing concerns for

public safety. State legislatures are already focusing attention on these systems with reference to privacy and security concerns.

## FAA Regulations Regarding UAS Operations

Effective August 2016, the FAA has promulgated new 14 CFR Part 107 regulations specific to civil commercial operations of small UAS weighing less than 55 pounds. The FAA regulations permit small UAS to operate during daylight in confined operating areas, within visual line of sight of a “remote” pilot/observer. The FAA regulations require the operator to have a remote pilot certificate and establish certain criteria for visual observers. To the extent a small UAS operation cannot conform to the existing regulations, the FAA also permits a waiver process. Therefore, an operator should either comply with the existing regulation or request a waiver. The following is a brief overview of the new Part 107 operating requirements:

- UAS must weigh less than 55 pounds, travel less than 100 mph and can fly no higher than 400 feet above the ground.
- UAS must be operated within visual line of sight of the remote pilot or a designated observer. However, if an observer is used, the aircraft must still be close enough to the remote pilot that the pilot can see the aircraft.
- UAS cannot operate directly over people who are not involved in the UAS operation.
- Night flight is not permitted.
- The weather must be at least three miles visibility.
- Air Traffic Control is needed for operations within certain airspace.
- No careless or reckless operations.

The FAA Part 107 regulations applicable to small UAS do not apply to hobbyists’ operation of RC model aircraft. To qualify as a model aircraft, the aircraft must be flown strictly for hobby or recreational use and:

<sup>4</sup> [http://www.nytimes.com/2014/11/07/world/europe/3-found-with-drones-near-nuclear-plant-are-questioned-in-france.html?\\_r=0](http://www.nytimes.com/2014/11/07/world/europe/3-found-with-drones-near-nuclear-plant-are-questioned-in-france.html?_r=0)

<sup>5</sup> <http://www.ctpost.com/news/article/Drone-buzzes-Bridgeport-harbor-then-crashes-4511159.php>

<sup>6</sup> <http://www.washingtontimes.com/news/2015/jan/26/threat-assessment-drone-white-house-counter-drone-/#!>



- The aircraft is operated in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization;
- The aircraft is limited to not more than 55 pounds unless otherwise certificated through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization;
- The aircraft is operated in a manner that does not interfere with and gives way to any manned aircraft; and
- When flown within five miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation.

Someone flying a remote controlled airplane in a park may qualify as a model aircraft. However, if that person is taking pictures or video for the business, then the operation would be a UAS operation regulated by Part 107. Therefore, it is important that law enforcement understand the distinction between UAS and model aircraft operations so they can initially ask the operator questions to determine the nature of the operation.

LEAs need to understand the characterization of authorized (lawful) and unauthorized (unlawful) UAS operations. With the new FAA UAS regulations, civilian UAS operations fall within two unique categories:

- 1) **Part 107 Operations.** A person may operate a small UAS consistent with the Part 107 regulations identified above. The size of the UA, the remote pilot certificate, daylight operations and visual line of sight are key elements of the new rule.
- 2) **Waiver or Section 333 Exemption.** In 2012, Congress passed the FAA Modernization and Reform Act (FMRA), which included a provision allowing the FAA to create special rules for certain UAS (Section 333 of the Act). This authority allowed the FAA to grant exemptions from certain airworthiness requirements but not airman requirements. The new Part 107 regulations also contain the ability to request a waiver from the new regulatory requirements.

Therefore, a civil operator could petition the FAA to be exempt from certain regulatory requirements. Once the exemption is granted, the operator obtains a Certificate of Waiver or Authorization, which stipulates under what conditions operators can fly for their area of operation.

The following are examples of operations that could comply with the Part 107 regulations if the operator meets those requirements stipulated within the new Part 107 rule:

- A real estate agent/company using a UAS to take picture of a property.
- Television or print media using a UAS to capture images.
- A photographer using a UAS to take pictures for potential sale.
- A professional sports franchise using a UAS to take video or pictures of practice.
- An attorney or investigator using a UAS to take pictures of a crime or accident scene.

## FAA Enforcement Capabilities

As mentioned earlier, the FAA derives its regulatory authority from 49 U.S.C. The agency has a safety mandate similarly derived from 49 U.S.C. § 40103 that requires the agency to regulate aircraft operations conducted in the NAS, which includes UAS operations. This safety mandate provides for the protection of persons and property on the ground, and to prevent collisions with other aircraft or objects (e.g., transmission towers, etc).

In executing its statutory responsibilities, the FAA has both civil and criminal enforcement authority. Traditionally, compliance with FAA regulations is largely an honor system, as the FAA cannot inspect every airman or aircraft before, during or after operations. Pilots comply with the FAA regulations because of the FAA's most significant enforcement method: a suspension or revocation of an airman or airworthiness certificate. The FAA will require a UAS operator to get requisite training and pass a knowledge test in order to obtain a remote pilot certificate issued by the FAA. Unfortunately, most civilian UAS operators do not have a pilot (airman) certificate so the FAA does not have visibility of them and, if they are



discovered to have violated a particular FAR, the FAA cannot take a certificate action against them. The FAA is typically limited to civil penalties of varying degrees of monetary fines. In certain serious violation cases, the FAA may pursue a criminal action as well as a civil action.

The FAA must exercise caution in executing its administrative safety enforcement functions so as not to confuse or interrupt criminal law enforcement proceedings. It is clear that public safety is more completely assured when FAA enforcement actions are well coordinated with law enforcement responsibilities.

## Law Enforcement's Enforcement Capabilities

The following is intended to provide an overview of possible state laws that may assist law enforcement in addressing unauthorized or unlawful UAS operations. As a general matter, a number of states have already passed laws directly related to UAS operations. Many of these statutes may even impact or influence LEAs' decisions to acquire this technology as an added tool for public safety. Agencies are encouraged to research and discover any state laws or local ordinances that may directly address the use of UAS. Though the language of the laws varies, they clearly indicate a concern about the use of UAS and how they will affect the public, with privacy being chief among those concerns. A number of these laws focus on government actors instead of civilians. Therefore, it is important to determine who the law applies to when reviewing a specific UAS law within a jurisdiction.

While the public expresses concerns about LEAs deploying UAS technology as a means to "spy" on them, violating their Fourth Amendment rights, the real and present danger exists not from the LEAs but from fellow neighbors and citizens. Some people may be inclined to capture video or still photos of others using a UAS, essentially peeping into the privacy of another in order to capture images or video of others in an unlawful way.

In addition to specific UAS legislation, law enforcement may use a number of existing laws to help address illegal or

improper UAS operations. Still, the prosecutor will need to be convinced that the time and effort to prosecute a UAS case under one of these laws is necessary and worthy of exploit.

a. **Disorderly Conduct Laws.** In certain states, the act of being a "peeping Tom" may be punishable as an example of disorderly conduct. Across the country, disorderly conduct statutes and local ordinances prohibiting disorderly conduct vary. In general, disorderly conduct is punished as a misdemeanor and constitutes words or acts which tend to disturb the peace or endanger the morals, safety or health of the community. Whether the operation of a UAS can be prosecuted as disorderly conduct depends heavily on the particular circumstances of the operation and the disorderly conduct statute and/or ordinance in the particular jurisdiction.

b. **Peeping Tom Laws.** Other state laws are more specifically directed at peeping Toms. Nearly identical Georgia and Louisiana statutes actually define the term peeping Tom and prohibit the act of peeping through windows or doors, or similar places, on or about the premises of another for the purpose of spying upon or invading the privacy of the persons spied upon and the doing of any other acts of a similar nature which invade the privacy of such persons.<sup>7</sup>

Other statutes do not use the exact term peeping Tom, but still punish the same type of conduct. For example, a Virginia statute punishes, as a misdemeanor, any person that knowingly creates photo or video images of a nonconsenting person by any means whatsoever if the person is indisposed or otherwise has a reasonable expectation of privacy.<sup>8</sup>

A Washington statute criminalizes the viewing, photographing or filming of another person, for sexual arousal or gratification, when the person is in a place where he or she would have a reasonable expectation of safety from casual or hostile intrusion or surveillance.<sup>9</sup>

In Mississippi, a "video voyeur" statute criminalizes photographing, taping or filming a person in violation of that person's expectation of privacy.<sup>10</sup>

<sup>7</sup> Ga. Code §16-11-61; Louisiana Stat. 14:284.

<sup>8</sup> Va. Code § 18.2-386.1; see also Id. at §18.2-130 "Peeping or spying into dwelling or enclosure."

<sup>9</sup> State v. Glas, 54 P.3d 147 (2002) (upholding the Washington state's voyeurism statute found at § 9A.44.115 against a constitutional challenge for overbreadth and vagueness).

<sup>10</sup> Miss. Code. Ann. § 97-29-63. *Gilmer v. State*, 955 So. 2d 829 (Miss. 2007), cert. denied, 128 S. Ct. 1120, (U.S. 2008).



Courts, when presented with challenges to these laws as being unconstitutionally overbroad and vague, have reasoned that the “lewd-intent” or “wrongful intent” element in these peeping Tom statutes prevented an overbroad prosecutorial reach and only punish the act of photographing, filming, or videotaping another person with an improper intent and in a place where the victim had a reasonable expectation of privacy. The introduction of a small, quiet (stealthy) UAS to perpetrate these crimes on another will likely increase the level of attention and impact these laws currently reflect.

c. **Nuisance/Noise Laws.** UAS operators may also run afoul of state statutes and common law doctrine prohibiting public and private nuisances. Like the peeping Tom statutes, only unreasonable activities of UAS pilots will be considered to be nuisances to the public at large or to a private person.

A public nuisance is an unreasonable interference with a right common to the general public. An action may interfere unreasonably with a public right if it interferes significantly with public health, safety or convenience. Both public and private parties can seek to enjoin a party from continuing such a public nuisance. In certain circumstances, private parties may even recover damages suffered by a public nuisance.

A private nuisance is a substantial and unreasonable invasion of another’s use and enjoyment of private land. This “unreasonableness” analysis balances the utility of the conduct alleged to be a nuisance against the gravity of the harm caused by it.

In the context of UAS, both local law enforcement and private citizens can rely on nuisance law to seek protection from unreasonable UAS flights. Extensive flying at low altitudes, accompanied by excessive noise and unreasonable annoyance and apprehension to occupants on the ground, can constitute a legal nuisance when it interferes substantially with the occupants’ enjoyment of their property. Such

a nuisance claim against UAS operations would be analogous to homeowners’ claims seeking damages caused them by excessive noise emanating from jet aircraft landing and taking off from nearby airports or from a very loud party next door. For example, several homeowners living by Los Angeles International Airport from 1967 to 1975 recovered \$86,000 in aggregate damages for the mental and emotional distress they suffered due to the noise of jet engines.<sup>11</sup>

While a nuisance claim challenging the use of UAS would be analogous to the nuisance claims against jet aircraft, several characteristics of UAS may make UAS less intrusive than helicopters or planes powered by jet engines. First, UAS are almost always significantly less noisy than traditional manned aircraft. Second, UAS commonly used for civilian purposes are much smaller than common aircraft used today. Finally, UAS operations likely will not be organized in a routine manner at a fixed site like aircraft are organized around airports. For these reasons, UAS are less likely than traditional aircraft to rise to the level of substantial interference required to satisfy a claim for public or private nuisance.

d. **Identity Theft and Invasion of Privacy.** Traditionally, fundamental privacy rights have been recognized through tort law. The various privacy tort concepts (including intrusion upon seclusion, appropriation of identity or likeness, public disclosure of private facts, and portrayal in a false light) are incorporated into case law and/or statutes in most states around the country. Additionally, some criminal statutes now punish these tortfeasors for their acts invading a privacy right. Many of these criminal statutes substantially overlap with or are embodied in the peeping Tom statutes described above.<sup>12</sup> Other statutes are more focused on the appropriation of a nonconsenting person’s identity or likeness for the perpetrator’s own gain.

For example, Oklahoma punishes as a misdemeanor the use of one’s portrait or picture for the purpose of advertising without having obtained the consent of the person depicted.<sup>13</sup> Also, South Dakota punishes the dissemination

<sup>11</sup> Greater Westchester Homeowners Ass’n v. City of Los Angeles, 603 P.2d 1329 (Cal. 1979); Baker v. Burbank-Glendale-Pasadena Airport Authority, 705 P.2d 866 (Cal. 1985); Aviation Cadet Museum, Inc. v. Hammer, 283 S.W.3d 198 (Ark. 2008); Broadbent v. Allison, 667 S.E.2d 342 (N.C. Ct. of Appeals 2009); but see Wells v. Kentucky Airmotive, Inc., 2014 WL 4049894 (Ky. Ct. of Appeals 2014) (holding plaintiff’s nuisance claim was preempted by the federal regulatory scheme developed by the FAA).

<sup>12</sup> See, e.g., Wisc. Stat. 942.08, “Invasion of Privacy” and Missouri Stat. 565.252 “Invasion of Privacy, penalty.”

<sup>13</sup> 21 Okl. Stat. § 839.1



of any photographs taken of a person not wearing clothing and taken without that person's consent that were captured "with the intent to self-gratify, to harass, or embarrass and invade the privacy of that other person."<sup>14</sup> A UAS operation that generates photographs or video that the UAS pilot then appropriates and disseminates could be criminal under these types of statutes.

- e. **Reckless Endangerment.** Any criminal prosecution for reckless endangerment of a UAS pilot would hinge on the presence or absence of a UAS pilot's unreasonableness. In this instance, the standard of unreasonableness is heightened to a level of gross negligence or criminal recklessness. Reckless endangerment laws prohibit a person from recklessly engaging in conduct that creates a substantial risk of death or serious physical injury to another person.<sup>15</sup> In Maryland, for example, reckless endangerment convictions will only stand if the defendant's conduct, viewed objectively, was so reckless that it constituted a gross departure from the standard of conduct of a law-abiding person.<sup>16</sup>

In fact, in a recent administrative case receiving much attention from UAS hobbyists and commercial actors, the FAA instituted regulatory sanctions against a UAS pilot that likely could have faced criminal prosecution under most states' reckless endangerment statutes. In that case, the FAA sought to assess Raphael Pirker a civil penalty of \$10,000 for operating a UAS in a reckless and careless manner. Pirker had been operating a UAS in Charlottesville, Va., to capture video and photographs of the University of Virginia campus and medical center. The FAA found Pirker to have acted recklessly because he "deliberately operated [his UAS] at extremely low altitudes over vehicles, buildings, people, streets, and structures."<sup>17</sup> Operation of UAS under such circumstances could be viewed as a gross departure from a lawful standard of conduct and, therefore, punishable by a reckless endangerment criminal statute.

- f. **Criminal Trespass.** Conceivably, a UAS pilot could simultaneously or sequentially violate a law prohibiting trespass and a law prohibiting public or private nuisance. A trespass is an invasion of a plaintiff's interest in the exclusive possession of land (i.e., an entry of something tangible onto the property). On the other hand, described above, a nuisance is an interference with a plaintiff's interest in the use and enjoyment of the land, which does not necessarily require a physical intrusion. To commit a trespass, the pilot would not have to physically enter private property him or herself. Instead, flying the UA (a tangible thing) onto private property would itself constitute a trespass.

In 2015, the White House fell victim to this fact pattern of "trespass-by-drone." Since the trespass garnered widespread media attention, it has been reported that the UAS pilot did not intentionally fly his UA onto the White House property. Nonetheless, under the longstanding concept of trespass, the UAS pilot committed a trespass when his tangible property invaded the White House's right to exclusive possession of land. As a friend of the UAS pilot told CNN, "If there's something positive [to] come out of this it will be for people to understand that they have to have a greater awareness around [UAS] and a greater understanding of the laws that are applied to flying drones, not just around [Washington, DC] but around all sensitive places."<sup>18</sup>

## Law Enforcement's Response Options

When it comes to UAS operations, federal, state and local law enforcement agencies already have many techniques and protocols in their enforcement tool box to correctly confront and manage suspected unauthorized or illegal UAS operations.

One of the more important issues for LEAs interdicting unauthorized or illegal UAS operations is LEAs' familiarity with national airspace restrictions relevant to their enforcement area of responsibility. The FAA frequently publishes flight restrictions to protect various sensitive operations, special

<sup>14</sup> South Dakota Code § 22-21-4.

<sup>15</sup> See e.g., Md. Code Crimes § 3-204 (a misdemeanor offense).

<sup>16</sup> *Kilmon v. State*, 905 A.2d 306 (Md. Ct. App. 2006).

<sup>17</sup> Raphael Pirker Decisional Order, NTSB, Docket CP-217 (March 6, 2014), Attachment 1.

<sup>18</sup> Friend: Drone crasher wants to apologize to Obama family, available at: <http://www.cnn.com/2015/02/02/politics/white-house-drone-crasher-apology/>. (Last visited April 6, 2015).



security events (e.g., select law enforcement activity, space flight operations, major sporting events), and presidential movements. All flight operations conducted within these flight restriction areas are typically prohibited and therefore any UAS operation conducted within those restricted areas, without a specific authorization, would be a criminal activity. The most up-to-date list of Temporary Flight Restrictions (TFRs) is available at <http://tfr.faa.gov/tfr2/list.html>.

Successful enforcement of any civil or criminal activity always depends upon a timely, complete and factually accurate report of the event and circumstances. Law enforcement authorities and other first responders can assist the FAA in its enforcement role by exercising their normal diligence when confronting suspected unauthorized or illegal UAS operations. By observing the brief list of actions below, which LEOs likely already do in their normal investigative routines, LEAs will be able to provide the FAA with invaluable assistance when following up on dangerous or suspected unauthorized UAS activities.

- 1. Identification and Interviews of Witnesses.** The identification of witnesses and the conduct of initial interviews in a timely manner are critical to supporting potential enforcement actions by the FAA. Gathering as much information (or evidence) concerning the event ensures that FAA administrative proceedings are sufficiently supported. FAA inspectors frequently return to re-interview witnesses so it is very important to be able to locate and conduct independent interviews of these witnesses.
- 2. Identification of the UAS Operator.** Today, very few of the small UAS technologies have any identifying markings, so it is important to locate and positively identify the UAS operator and anyone else that may be supporting the flight. Interestingly, many operators advertise their services openly on the internet or social media. Many FAA actions have been initiated from YouTube videos posted by the offender. It is also important to discover and validate (if possible) the purpose of the UA flight (e.g., commercial venture, to complete a business contract, or to sell pictures/videos etc.)
- 3. Viewing and Recording Location of the Event.** LEOs taking photos or videos of the scene in close proximity to the event help to distinguish the daylight and prevailing

weather conditions during the flight. The use of any identifying landmarks will help to judge the position of the UA, its approximate altitude, and distance from people and structures.

- 4. Identifying Sensitive Locations, Events or Activities.** There are several sensitive (national security implications) security-driven airspace restrictions around the country (e.g., nuclear power plants, etc.). From time to time, there are also security-sensitive activities ongoing that the FAA believes must be protected from overflight by aircraft (e.g., a political event, a major sporting event like the Super Bowl or NASCAR, or an ongoing law enforcement or natural disaster event). In order to protect those locations or events, the FAA will establish Temporary Flight Restrictions (TFRs), Prohibited Areas, and other airspace security measures (e.g., the Washington, DC Flight Restricted Zone (DC FRZ)), in which flight of aircraft is prohibited. If there is any question as to whether a TFR has been established in a given location, contact the nearest air traffic facility or flight service station for further information or visit <http://tfr.faa.gov/tfr2/list.html> for a graphic representation of TFRs locatable by state and effective dates.
- 5. FAA Notification.** Immediate notification of an incident, accident or other suspected violation to one of the FAA Regional Operation Centers (ROC) located around the country is valuable to the timely initiation of the FAA's investigation. These centers are manned 24 hours a day, seven days a week with personnel who are trained in how to contact appropriate duty personnel during nonbusiness hours when there has been an incident, accident or other matter that requires timely response by FAA employees. For ROC contact information, see [https://www.faa.gov/uas/resources/law\\_enforcement/media/LEO\\_guidance\\_card.pdf](https://www.faa.gov/uas/resources/law_enforcement/media/LEO_guidance_card.pdf).
- 6. Evidence Collection.** Identifying and preserving any public or private security systems that may provide photographic or other visual evidence of UAS operations, including video or still picture security systems, can provide essential evidence to the FAA. Many times these systems do not permanently store information but erase it as the system recycles at a given interval. Local law enforcement is in the best position to inquire and make initial requests



to identify and preserve this form of evidence or obtain legal process for securing this evidence in the context of an investigation of a possible violation of state criminal law. In addition, some UAS may be marked with identification numbers (N-numbers) signifying FAA registration. The presence or lack of these identification numbers may be significant in an FAA investigation. For example, an operator may state that he or she is conducting an approved commercial activity, which usually requires registered aircraft. However, the absence of registration markings on the UAS may indicate that the aircraft is not registered, meaning the operation may not be authorized.

*Note: 14 CFR part 48 stipulates that all UAS must be registered with the FAA and that the N-number must be affixed to the UA in a manner consistent with the regulation. UAS aircraft registration numbers may not be visible or discernable from a distance because of the size and nontraditional*

*configuration of some UAS. The registered owner of a UAS bearing registration/identification numbers can be discovered by searching for the N-number on the FAA's website: [www.faa.gov](http://www.faa.gov).*

Other investigative methods may be initially valuable (e.g., consensual examination of the aircraft, equipment trailers, etc.).

Agencies should examine their own local and state ordinances to determine if specific UAS statutory regulations exist under which a lawful arrest or prosecution could be enacted.

If an agency or individual would like to discuss further planning regarding how to confront UAS situations, please feel free to contact your local FAA Law Enforcement Assistance Special Agent or the FAA's Law Enforcement Assistance Program Office at (202) 267-4641 or (202) 267-9411.

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