

MICHIGAN DEPARTMENT OF STATE POLICE

Report on Unmanned Aircraft Systems (UAS)

April 2018

In accordance with Article XVI of 2017 PA 107 (Sec. 702), the Michigan State Police (MSP) submits this report to the Senate and House Appropriations subcommittees and fiscal agencies regarding law enforcement issues related to the use of Unmanned Aircraft Systems.

Current Law Enforcement Issues

Unmanned Aircraft Systems (UAS) are gaining in popularity across the country. According to the Federal Aviation Administration (FAA), sales of UAS are expected to grow from 2.5 million units in 2016 to 7 million units in 2020. The majority of those units are for personal use, or what is referred to as a hobbyist by the FAA. With the increase in UAS sales comes the potential for nefarious uses of the system. The FAA maintains authority over all airspace within the United States, referred to as the National Airspace System (NAS). By maintaining authority over that airspace, the federal government places state, county, and local law enforcement in a position where they cannot enforce the rules and regulations set forth by the FAA.

Currently, local law enforcement officers contact the operator, seize the aircraft if necessary, type a report, and forward the information to a regional FAA Law Enforcement Assistance Program (LEAP) center. The regional LEAP center will then review the report and, within their sole discretion, may potentially contact the violator.

If the activity violates any state statute, the officer has the ability to enforce the statute without federal government intervention. An example of a state violation would be a UAS flying over a vehicle crash scene and hindering the efforts of a helicopter medical evacuation. This is a direct violation of Section 21 of the Unmanned Aircraft Systems Act (MCL 259.321), utilizing an unmanned aircraft that interferes with the official duties of a police officer, firefighter, paramedic, or search and rescue personnel. If the officer on scene encounters a UAS that is interfering with their official duties, then the officer now has authority under state law to investigate the crime and stop or deter the illegal activity.

The MSP Aviation Unit has been involved with the development of UAS use by civilians and law enforcement since 2014. In addition, MSP became operational using these systems for law enforcement purposes through approval by the FAA in February 2015. Since that time, many law enforcement agencies across the country have contacted the MSP Aviation Unit to learn more about how MSP has used UAS to greater enhance the law enforcement services provided to the State of Michigan.

Some examples of current law enforcement issues with UAS use by the general public include:

1. UAS used to follow someone down the street to their house, flown close to windows, and presumably used to look into the windows of the home.
2. UAS flown over a crash scene where a medical helicopter was summoned to transport an injured vehicle occupant. The medical helicopter was prevented from landing until the UAS was safely moved away from the scene by the civilian operator.
3. UAS flown over a MDOC prison property where contraband was being dropped onto the yard.
4. UAS flown over large groups of people with no regard to those persons safety if a malfunction was to occur with the UAS.
5. The threat a UAS poses within large groups of people (e.g. open air stadiums) where a device or chemical may easily be dispersed from the UAS itself.
6. UAS used to gather intelligence on critical infrastructure in this state.

These are just a few examples of current issues law enforcement face with this technology. As law enforcement, our goal is to help Michigan citizens feel safe. With the mobility of UAS and their capabilities of filming a person it is difficult for law enforcement to provide comfort when reasonable laws and education to UAS operators are not in place.

Current State and Federal Laws

The Michigan Legislature enacted, and Governor Snyder signed, Public Act 436 of 2016, which provides several criminal laws for law enforcement to use to deter malicious use of UAS. In addition, the Act created the Unmanned Aircraft Systems Task Force (UASTF). The newly enacted laws gave state and local law enforcement the ability to enforce:

1. Harassment with a UAS.
2. Using a UAS in violation of a court order.
3. Using a UAS to invade a reasonable expectation of privacy.
4. Using a UAS in violation of the sex offender registry.
5. Using a UAS to interfere with law enforcement, firefighters, paramedics, and search and rescue personnel.

These laws provided some tools to state and local law enforcement to actively enforce UAS violations.

The UASTF was created to bring a collective group together to focus on the future of UAS and to discuss issues related to future development of technology within this sector of the aviation industry. The MSP was represented and provided first-hand knowledge and experience on the issues law enforcement face with the more widespread acceptance and use of this revolutionary technology. Several of the recommendations to the legislature addressed UAS issues previously encountered by law enforcement, along with creating outreach programs to educate both local units of government and UAS users within the general public. The full UASTF report is located here:

http://www.michigan.gov/documents/aero/UASTF_Final_Report_v2_Full_606520_7.pdf

The legislature has reviewed the UASTF report, and numerous bill proposals have been created as a result of the UASTF recommendations. As a state-level law enforcement agency, this is extremely encouraging, and we look forward to seeing some of those recommendations become state law. However, one issue that routinely plagues state and local law enforcement is the FAA rules and regulations not being enforceable by state and local law enforcement officers. The FAA has set forth all-encompassing rules and regulations, but the vast majority are civil in nature. Without a criminal penalty attached, state and local law enforcement lack authority to enforce the federal rules.

In an effort to address this situation, the Michigan Legislature has proposed legislation (HB 5118 of 2017) that would require the Aeronautics Commission, MSP, and the UASTF to enter in agreement with the FAA to discuss these issues with a goal of reaching a resolution that state and local law enforcement agencies can enforce rules promulgated by the FAA. Adopting FAA UAS regulations, if permitted, would effectively create a civil or criminal penalty under state law, giving law enforcement greater authority to act when a UAS is observed to be violating FAA regulations. Absent broader authority to adopt FAA regulations by reference, the legislature has previously enacted legislation substantially similar to select provisions of FAA regulations. Not specifically related to the operation of a UAS, the legislature recently enacted Public Acts 29-30 of 2017 to prohibit a person from aiming a beam of directed energy (e.g. a laser) at or into the path of an aircraft.

Law enforcement faces many challenges surrounding UAS use around large gatherings of people. Large groups of people represent a grave security risk when viewed through the potential lens of an extremist wishing to do them harm using a UAS. The currently available technology is limited on effective means for law enforcement to seize control of a UAS and prevent it from flying over a key facility or dropping a nefarious device over an open-air stadium. Current Federal Communication Commission (FCC) and FAA rules prevent state, county, or local law enforcement from interfering with an aircraft or jamming a frequency. Technology is being developed which allows law enforcement to take control of a UAS, however, it would be illegal by federal statute for state or local law enforcement to actually use the technology. Law enforcement not only needs laws enacted to prohibit the illicit use of UAS by the general public, but also the tools to combat and counter the use of UAS technology in the future.

Recommendations

Among law enforcement agencies nationwide, MSP is a leader in UAS technology. In 2014, the Department became the first law enforcement agency in the country to receive statewide authorization to operate a UAS specifically for law enforcement purposes. Since that time, the program has grown from one to three UAS. In addition, the MSP Aviation Unit has logged over 400 UAS missions flown in support of federal, state, county, and local law enforcement, as well as local fire departments throughout the state. Furthermore, the unit just received authorization from the FAA to operate multiple UAS aircraft with one operator simultaneously, becoming the first law enforcement agency in the country to receive such authorization.

Over 200 law enforcement agencies across the country have reached out to the MSP seeking advice on numerous issues, ranging from how to establish a robust UAS program, to enforcing laws on UAS. Moreover, MSP's UAS program is constitutionally defensible and holds privacy rights first and foremost. MSP's policies on the use of UAS were developed in conjunction with the American Civil Liberties Union (ACLU). They require a search warrant to be obtained if a UAS is used for surveillance, and the policies prohibit the use of a UAS over an individual's property to further an investigation in the absence of a search warrant.

Currently, the department's primary use of UAS is to document crime scenes, crash scenes, and fire scenes. Large maps and 3D images can be created from UAS photographs to aid the investigators in scene documentation. MSP's UAS policies have been shared with numerous agencies around the country with a recommendation that, at a minimum, they adopt the policy related to surveillance and operating over private property.

As leaders in the law enforcement community, MSP looks to the Michigan Legislature to be leaders in laws that put Michigan's citizens' safety first. Respectfully, some recommendations the MSP feels important to address are:

1. Create a Michigan UAS registration for all UAS flown, much like manned aircraft.
2. Create a law that makes it a penalty to operate a UAS without it being registered.
3. Clarify the trespass law to include UAS.
4. Adopt the FAA rules and regulations as state law.
5. Work with the FCC and FAA to bridge the gap and allow state, county, and local law enforcement the ability to access technology that could prevent a tragedy with a UAS from occurring.