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DRONE USE AND REGULATION IN THE PUBLIC SECTOR

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This *issue brief* provides a brief overview of public sector use of unmanned aircraft systems, commonly known as drones, including federal and state regulations, and current applications in Colorado.

Overview

Drones are unmanned aerial vehicles that are operated from the ground through remote controls or on-board computers. Interest in using drones for a wide variety of public sector applications has increased exponentially over the past few years. Governmental entities are using them for everything from inspections, surveillance, and data collection to law enforcement, fire fighting, and disaster emergency management. A recent federal Department of Transportation study predicted that public agencies will employ about 58,000 drones by 2035.

The Federal Aviation Administration (FAA) maintains rules governing the use of drones in both the private and public sector, both of which are subject to restrictions based upon the use, navigational methods, and physical characteristics of the drone. There has also been a growing trend of state and local drone-specific regulations in addition to the federal directives.

Federal Regulation and Public Use

Public entities such as state and local government agencies, law enforcement, and universities may elect to either operate drones under the federal rule, or seek FAA approval in the form of a certificate of waiver or authorization (COA).

Federal rules. In 2016, the FAA adopted the first operational rules, known as Part 107, for routine non-hobby use of drones weighing less than 55 pounds.[1] These rules outline how high drones may fly; provide limitations with respect to the airspace within five miles of airports, stadiums, and heavily populated areas; and require owners to operate within the line of sight and during daylight hours.

Certificates of Authorization. COAs come with fewer restrictions than Part 107 rules and are recommended for entities that plan to operate drones on a larger, more comprehensive scale. Any governmental entity may apply for a COA, and interested agencies are required to submit an application to the FAA, which in turn conducts a comprehensive operational and technical review of a respective drone program. Upon approval, drone operations may have more flexibility to fly at night or in otherwise restricted airspace to support search and rescue, research, or other emergency and safety efforts. COAs are generally granted for a prescribed period of time and include special provisions unique to the proposed request.

[1] 14 CFR Part 107

State Drone Laws

The National Conference of State Legislatures tracks state drone legislation and reports that, as of July 2017, 40 states have enacted laws and an additional 3 states have adopted resolutions regarding drones.

State statutes regarding public use of drones most commonly place restrictions on their use and address privacy-related issues. Examples of these restrictions include limiting use by law enforcement, prohibiting drones from flying over critical infrastructure or other public places, and preventing governmental entities from using drones to invade someone else's privacy or share private information.

Colorado Law and Regulations

While Colorado law does not currently restrict the use of drones in the state, in 2017 the General Assembly authorized a study and pilot project related to drone usage.

House Bill 17-1070. This bill requires the Center of Excellence for Advanced Technology Aerial Firefighting within the Department of Public Safety to examine drone use and its integration within state and local government operations. The study must identify ways to integrate drones within local and state government functions relating to firefighting, search and rescue, accident reconstruction, crime scene documentation, emergency management, and emergencies involving significant property loss, injury, or death. The study must also consider privacy concerns, costs, and timeliness of deployment for each of these uses.

The legislation also creates a pilot program. Under the pilot program, the Department of Public Safety must deploy at least one team of drone operators to a region of the state that has been designated as a fire hazard where they will be trained on the use of drones for the above specified functions.

Both the study and pilot project are conditional upon receipt of sufficient gifts, grants, and donations and will begin as soon as funds are secured.

Current Public Drone Use in Colorado

The Mesa County Sheriff's Office, Larimer County, the Colorado Department of Transporation (CDOT), and the University of Colorado at Boulder (CU Boulder) are examples of state and local agencies that fly drones for public use.

Mesa County. In 2008, the Mesa County's Sheriff Office began using drones in day-to-day operations as well as for crime scene investigations and suspect searches. Mesa County also assists the Colorado State Patrol and local fire departments by providing aerial photos taken by drones.

Larimer County. Officially launched in the summer of 2017, the Larimer County Unmanned Aircraft Team was formed through an intergovernmental agreement with several agencies in Larimer County. Participating jurisdictions are able to access drones to assist with search and rescue missions, crash scene investigations, and fire response.

Colorado Department of Transportation (CDOT). CDOT employs drones for many uses, including traffic control and construction, as well as environmental surveying, such as investigating geohazards near roads to detect rock slides.

The University of Colorado. University of Colorado researchers in Boulder are authorized to launch drones into extreme weather to collect data and measurements, study wind speeds, and take aerial photos to assist with various research projects the university is conducting. The university has also recently developed an advanced drone "swarming" technology that allows a single operator to control multiple drones for a variety of tasks, including searching for lost hikers or studying wildlife.