

House Study Committee on the Use of Drones

Report of the Committee

December 1, 2015

Georgia House of Representatives

House Study Committee on the Use of Drones

Members of the Committee

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Introduction

Commonly referred to as drones or unmanned aircraft systems (UAS), this technology is taking the nation by storm; however, regulations for their use have fallen behind. The mention of drones generally stirs up thoughts of military use for most but the useful applications for this ever changing technology are so much broader than air strikes and reconnaissance missions for our nation's armed forces. Drone technology can be used for search and rescue missions, news gathering, crowd control, GIS mapping, monitoring utilities, storm assessment, film making, and even agriculture. Many companies, law enforcement agencies, and local governments are embracing the possibilities this valuable tool might mean for cost savings and improving safety.

It is projected that approximately one million unmanned aerial vehicles (UAVs) will be sold during the holiday season this year. Daily we hear about near misses drones have had with piloted aircraft, interference with helicopters working to put out wildfires, as well as privacy concerns and infringement on civil liberties. In an effort to find a solution to such issues, the General Assembly passed House Resolution 744 which established the House Study Committee on the Use of Drones.

Hearings

The charge of the committee was to study areas of concern including the use of law enforcement agencies in obtaining evidence in criminal matters as well as in emergency conditions; the use of drones by state and local governing authorities and agencies; flying drones over private property and over the property with or without permission; the use of drones to photograph citizens in their private lives; and flying drones over public property. The committee held four hearing to gather information and to make recommendations the members may feel the House needs to consider.

The meetings were held as follows:

- September 30, 2015, Georgia Tech Research Institute
- October 14, 2015, Coverdell Legislative Office Building
- November 4, 2015, Coverdell Legislative Office Building
- November 16, 2015, Coverdell Legislative Office Building

Meeting I

Meeting I centered on presentations which explained the various applications of drones, emerging and developing technologies, and research that universities in Georgia are conducting. Don Davis, Cliff Eckert, and Miles Thompson briefed the committee on where the technology stands today and where it is going. The research team is exploring technologies such as: autonomy and collaborative control, sense and avoid capability, and various payloads. They also led research on agricultural use which resulted in over twenty novel uses for drones in crops. The

committee also heard from Michael Wilson, unmanned aircraft manager for the southern region at the Federal Aviation Administration, about their role in rule making and regulation of the new popular technology. Mr. Wilson explained that there are government users, commercial users, and the hobbyist or recreational user which must be regulated. Government users must get a Certificate of Authorization while commercial users must obtain both a Certificate of Authorization and a Section 333 Exemption. The rules for these users are outlined in their COAs. Additionally, the government users self-certify their crew and equipment while the commercial user must have a special air worthiness certificate. The hobbyist is expected to comply with section 336 of FAA Modernization and Reform Act of 2012. They must generally operate within line of sight, under 400 feet, avoid manned aircraft, fly only during daylight hours, and respect community-based safety guidelines. The final speaker was Navy retired Rear Admiral, Wendi Carpenter, who wanted to be sure to remind the committee to consider not only the possible issues with drone technology but also the opportunities because the technology is not limited to air. The uses for drones are widespread among air, land, and sea while air currently seems the most popular.

Meeting II

Meeting II provided a forum for the committee to hear from local governments and the law enforcement community. The local government representatives, the Association of County Commissioners of Georgia and the Georgia Municipal Association, echoed one another in stating that they would like to be able to use the technology for purposes of inspecting infrastructure, surveying, GIS mapping, monitoring of water and sewer lines, city planning, traffic management, search and rescue missions, and video production to market cities. They also maintained the desire to retain control of ordinances to restrict certain flights and noted that they would not like to see any unfunded mandates. Director of the Georgia Bureau of Investigation, Vernon Keenan, testified that his department would not want to see any restrictions that would hamper the ability of the agency to do their jobs. Director Keenan also had no problem with requiring a warrant to go onto private property because this is already the law and simply adding drones to that statute did not cause him any concern. The Georgia Chiefs of Police had no problems with the requirement of a search warrant and stated that drones would allow them to remain adequately staffed each shift. The Atlanta Police Department spoke on its own behalf and Chief Jones stated the importance of drone technology in search and rescue missions, crowd management, and hazmat missions. An additional concern voiced by Chief Jones was the lack of enforcement of FAA prohibitions of flight around or over critical infrastructure. With the absence of a physical presence by the FAA, local departments need approval from the state to enforce the regulations and prohibitions set by the Administration. Chief Grogan with the Dunwoody police echoed the Atlanta chief and added that the ability to restrict non law enforcement drones from crime scenes was very important to local departments. He stated that drones could be beneficial in training officers and community outreach programs. The sentiments of these departments were reiterated by the Columbia County Sheriffs' Office and a presentation by Staff Sargent Harden argued that perhaps the public is generally uneducated about FAA rules and regulations, that new models have GPS settings to stop drones within the limits of an airport or the 400 foot ceiling set by the FAA for hobbyists. An additional concern broached by members of law enforcement was the possibility of users weaponizing drones. The representatives from these agencies highlighted the need for the explicit prohibition of putting a

weapon on a drone. The Prosecuting Attorneys' Council highlighted cases regarding the fourth amendment, expectation of privacy, search and seizure and legitimate uses for drones by law enforcement.

Meeting III

Meeting III focused on industries currently using or interested in using drones for their business practices. The Georgia Department of Natural Resources addressed the committee regarding the desire to see a restriction put on individuals who may attempt to use drones to harass hunters or who might attempt to weaponize a drone and hunt with it. They felt the technology provided a good source to monitor docks and marshes, agency research including monitoring eagle nests, turtle eggs, and activities on the barrier islands. CNN testified in favor of using drones for the purposes of news gathering in instances of natural disasters, traffic incidents, and aerial coverage of events. The representative stated that they employ different types of drones that they have received their exemption from the FAA and they would not like to see restrictions on those who have been in compliance all along. Phoenix Air testified on behalf of their use of drones in film-making and explained how much regulation is involved in putting together a file in order to get a 333 exemption to use a drone on a closed set. The University of Georgia College of Agriculture and Environmental Sciences spoke to the applications of drones in agriculture. The uses ranged from crop inspection to spraying to water stress detection to maturity estimation. This ability was seconded by the co-founder of Agriview Systems based in Georgia. He also stated that current regulations require line of sight flight and suggested that in the future, for larger farms, technological monitoring should take the place of the line of sight requirements. The company DEDrone specializes in drone detection technology and testified that in order to attract more business to Georgia, a consortium of public private partnerships to continue to develop and test technology and look into security. The Associated General Contractors of Georgia suggested a slow pace in developing legislation so as not to get ahead of the FAA rules that will come out in 2016. Their representative stated that the use of drone technology in construction is still evolving. While originally used for surveying and inspection, drone technology is now being considered for use on long duration projects to gather daily benchmark photos rather than monthly benchmarks. He also noted that allowing drones to go into a high rise to take these photos and do inspections would improve the safety of construction personnel. This group prefers a uniform application and therefore hope the legislation would not be a double mandate when the FAA rules come out. Southern Company emphasized their heavy engagement with the FAA and their high priority on staying in compliance. The usefulness of drone technology to the utility was highlighted by a list of practical applications that could prove valuable to the industry. Drones could be used for storm assessment, lake management, coal pile surveys, inspection of transmission lines, and other aerial inspections.

Meeting IV

Meeting IV, the final committee meeting, heard testimonies centered around what the market for this booming technology looks like as well as what Georgia can do to nurture growth and economic development around the industry. The presenters included a professor from the School of Aerospace Engineering at Georgia Tech; the Director at the Center of Innovation for

Aerospace at the Georgia Department of Economic Development; the president of the volunteer group AUVSI Atlanta Chapter; the founder of Guided Systems Technologies, Inc.; and the CEO of AREA-I. Each of these speakers told the committee how ripe the environment in Georgia is for this growing market. They praised the Center for Innovation for facilitating connections between businesses, universities, and other diverse industries to all work together in growing the workforce, applications, and research. The greatest concern was that too stringent regulation may hinder those companies already playing by the rules. It was noted over the course of the committee sessions that the novice users and hobbyists pose the greatest risk whether it be because of misinformation or lack of education on the rules and regulations which already exist. The committee was adamant in their recognition of the fact that the 333 Exemption holders and the companies possessing COAs are maintaining compliance and thus do not need to be over regulated at the state level. There was additional consensus that the State should avoid passing legislation which might duplicate what the FAA requires and cause the process to be more onerous and thus drive business to other states. Georgia's goal is to remain competitive and to allow for expansion of this industry and it was clear that as far as those who testified were concerned, our state is already doing a good job of that. The committee discussed the idea of forming a commission to help maintain the support and growth that this industry is seeing in Georgia. The commission would be responsible for helping develop policy to encourage more industry expansion within the state. Members would include legislators, industry experts, and others deemed necessary to carry out the task given to the commission.

Committee Recommendations

1. Continue to monitor FAA Regulations with regards to registration requirements of hobbyist operators. The committee does not want to duplicate the process or hinder the industry.
2. Form a commission made up of legislators, researchers, industry experts, and others deemed appropriate to help develop policy and encourage industry expansion within the state.
3. Continue to encourage our universities and technical colleges to find ways to get involved by offering classes, certifications, or any other opportunities that may be deemed necessary.
4. Encourage the state and its agencies to use drone technology in areas where it could provide a cost savings or improve safety.
5. Look for opportunities to encourage venture capitalists to help with startups in Georgia.
6. Protect citizen privacy by making it unlawful to video or photograph another person's property without permission with limited exceptions to this.
7. Prohibit weaponizing a drone.
8. Make it a violation to fly in or around certain locations such as the capitol.
9. Allow local governments to restrict the use of drones on their publically owned land.
10. Make it unlawful to fly around or to interfere with an emergency scene or to interfere with public safety personnel carrying out official duties.
11. Require law enforcement to have a search warrant to use drones in areas to collect evidence where someone has a reasonable expectation of privacy.
12. Require any videos or photos taken of private property by a government entity without evidentiary value to a specific case to be purged.
13. Make it unlawful to take off from or to recover a drone from private or public property without permission.
14. Prohibit use of drones for hunting and fishing or to use a drone to interfere with someone else that is hunting, fishing, or trapping.
15. Prohibit the use of drones within so many feet of a public road without permission.

Georgia General Assembly House Budget and Research Office

This report is submitted pursuant to the following resolution:

HR 744

*which created the House Study Committee on the Use of Drones,
to which members were appointed by the Speaker of the House of Representatives*



Representative Kevin Tanner, Chairman



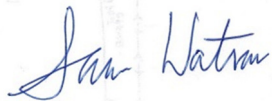
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