

MEMORANDUM

August 19, 2016

To: Dr. Ganesh Raman, Assistant Vice Chancellor for Research
Zachary Gifford, Director of Systemwide Risk Management

From: William Hsu, University Counsel

Re: **Update** on Unmanned Aircraft Systems (“UAS”) (aka Drones) - - New Set of Rules

The Federal Aviation Administration (“FAA”) has finalized rules that will permit the operation of so-called Small Unmanned Aircraft Systems (“sUAS” or “small UAS”) without the need to obtain formal FAA authorization. The sUAS rules will be effective August 29, 2016. This is an update regarding those rules.

We have previously emphasized that UAS must be used in a manner consistent with the legal, public safety, and ethical responsibilities of CSU and the campuses. Consistent with that objective, we had strongly advised and recommended that each campus implement an internal process for reviewing and approving any proposed UAS operation and that the review process, at a minimum, involve the Provost or delegate, Dean of the relevant college, Risk Management and the campus Police Department. In light of the new sUAS rules and other recent developments, we wish to repeat and re-emphasize the need for campuses to have in place a review process and associated policies covering UAS operations.

A. Recap of Current User Pathways

Under current FAA rules and regulations, there are essentially three ways in which an individual can allowably operate a UAS in connection with or as part of their official CSU activities.

First, as a qualified governmental entity, CSU can apply to the FAA for a public aircraft (or public) Certificate of Authorization (“COA”). A public COA allows a UAS to be operated for a purely non-commercial activity or purpose. The activities regarded by the FAA as being purely non-commercial in nature, however, have been fairly limited.

Second, if the UAS operation involves a commercial purpose or activity, CSU can apply for a civil aircraft (or commercial) COA. Any entity is eligible to apply for a commercial COA. A commercial COA application is frequently accompanied by and filed in conjunction with a Section 333 Petition for Exemption. In April 2016, CSU filed a systemwide Section 333 Petition for Exemption and commercial COA application. The CSU Petition and application is still pending and awaiting action by the FAA.

Third, one can operate a UAS as a hobbyist or recreational user. Hobbyists and recreational users do not need a COA to operate a UAS. Their operation of UAS is subject to and controlled by the so-called Model Aircraft (Section 336) Rules.

CSU and individuals operating in their CSU employment capacity do not qualify as hobbyists or recreational users. However, that is not necessarily the case with students. The use of UAS by students as a component of their science, technology and aviation-related educational curricula, or other coursework such as television and film production or the arts, falls within the definition of a hobby or recreational use. Consequently, that category of students may, without formal FAA approval, operate a UAS in compliance with and under the Model Aircraft Rules.

This proposition does not apply to faculty members. Faculty members cannot, even as part of a class or course, operate a UAS under the hobbyist or recreational user rule. Faculty members may provide only *de minimis* or limited operational assistance to students.

B. The New Pathway -- Small UAS (Part 107) Rules

The FAA has adopted new rules for the operation of small UAS. The new rules go into effect on August 29, 2016, and are sometimes referred to as “Part 107.”

The new rules allow sUAS to be operated for a variety of commercial purposes without obtaining formal FAA approval. A small UAS is one that weighs less than 55 lbs./25 kgs. The sUAS can even carry an external load or transport items, provided the load/item is securely attached, does not raise any operational or safety issue, and does not cause the sUAS to exceed a total weight of 55 lbs.

The key requirement under Part 107 is that the individual operating the sUAS must either (i) have a remote pilot airman certificate with a small UAS rating, or (ii) be under the direct supervision of a person who holds such a certificate. The certified remote pilot in command is held responsible for (a) conducting a preflight check and inspection of the sUAS to ensure it can be safely operated; (b) confirming that all applicable registration requirements are met; (c) maintaining all required documentation and records; and, (d) timely reporting to the FAA any incident that involves a more than trivial injury, a loss of consciousness, or property damage of \$500 or more.

Operation of sUAS under Part 107 is subject to various restrictions. They include the following:

- The sUAS must remain within the visual line-of-sight of the remote pilot in command and the person manipulating the flight controls, or if a visual observer is being utilized, within that person’s visual line-of-sight.

- The sUAS must remain close enough to the remote pilot in command and the person manipulating the flight controls for those persons to be able to see the sUAS unaided by any device other than corrective lenses.
- No person may act as a remote pilot in command or the visual observer for more than one sUAS operation at a time.
- The sUAS can be operated only during daylight hours. A sUAS can be operated during civil twilight (30 minutes before official sunrise to 30 minutes after official sunset) but only with appropriate anti-collision lighting.
- The sUAS may not operate over any person not directly participating in the operation unless that person is under a covered structure or inside a covered stationary vehicle.
- The sUAS cannot be operated from a moving aircraft.
- With very limited exceptions, the sUAS cannot be operated from a moving vehicle.
- The sUAS cannot be operated in a careless or reckless manner, or interfere with airport operations.
- The sUAS cannot carry or transport any hazardous material.
- The maximum operational groundspeed is 100 mph (or 87 knots).
- The maximum operational altitude is 400 feet above ground level. However, if the sUAS operation is proximate to a structure, the maximum altitude is 400 feet above the top of the structure.
- Operations within Class G airspace do not require formal Air Traffic Control permission.
- Operations within Class B, C, D and E airspace require formal Air Traffic Control permission.

Several of these operational restrictions are waivable. The operator can apply for a waiver from the FAA. The operator must demonstrate that the sUAS operation can be conducted safely if the requested waiver was granted.

C. Public COA and Part 107

If the activity qualifies as being non-commercial in nature, CSU can operate sUAS pursuant to either a public COA or commercial COA, or under Part 107. There is no requirement that the purpose or activity be commercial in nature in order to operate through a commercial COA or under Part 107.

If there is a public COA already in effect, the sUAS can be operated either under the terms of the existent public COA or in accordance with Part 107. The remote pilot in command needs to make that determination before the flight operation is conducted.

D. Commercial COA and Part 107

If the activity is commercial in nature, CSU can operate sUAS pursuant to a commercial COA/Section 333 exemption, or under Part 107. If there is a commercial COA/Section 333 exemption already in effect, the sUAS can be operated either under the terms of the existent commercial COA/Section 333 exemption, or in accordance with Part 107. The remote pilot in command needs to make that determination before the flight operation is conducted.

E. Educational Use and Part 107

Students engaged in educational use can operate sUAS either as hobbyists or recreational users, or under Part 107. “Educational use” does not include operating the sUAS in conjunction with faculty research activities, or as part of a class where the purpose of the class is UAS flight instruction. Those operations would fall outside the definition of “educational use,” and would need to be conducted under Part 107.

Faculty members who wish to play a more active and direct role in operating sUAS as part of class, course or curriculum can do so in accordance with and under Part 107.

F. The Pending CSU Systemwide Section 333 Exemption Petition/Commercial COA Application

The FAA is in the process of moving all pending Section 333 exemption petitions into one of three tiers. Tier 1 will include all Section 333 petitions where the proposed UAS operations could be conducted entirely under Part 107. Tier 2 will include proposed UAS operations that could be conducted under Part 107, but would require a waiver of some associated restrictions. Tier 3 will include operations that could not be conducted under Part 107 or a waiver issued under Part 107.

With respect to Tier 1 petitions, the FAA has indicated that it will not take any further action on the petitions. Although not entirely clear or certain, we believe the CSU systemwide

petition will be placed into Tier 1. All of the proposed sUAS uses identified in the CSU systemwide petition appear to be covered by Part 107. Assuming that is the FAA's interpretation as well, the FAA will likely take no further action on the pending CSU systemwide petition.

I hope you find this update helpful. If you have any questions or wish to discuss anything, please free feel to contact me.