

**SOUTH DAKOTA BOARD OF REGENTS**

**Academic and Student Affairs**

**AGENDA ITEM: 6 – L**

**DATE: March 28-30, 2017**

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**SUBJECT: BOR Policy 1:30 Revision – Unmanned Aircraft Systems Policy (Emergency Approval)**

The Board of Regents approved the system’s [Unmanned Aircraft Systems \(UAS\) Policy](#) (BOR Policy 1:30) at its [April 2015 meeting](#). Subsequently, on June 21, 2016, the Federal Aviation Administration issued its new rules for non-hobbyist small unmanned aircraft operations – Part 107 of the Federal Aviation Regulations – which cover a broad range of commercial uses for drones weighing less than 55 pounds. The new rules, commonly referred to as “Part 107,” became effective August 29, 2016. The FAA summary of Part 107 can be found [here](#).

Prior to Part 107, universities had to identify an operation as civil or public, then pursue a Certificate of Authorization (COA) or Section 333 Exemption, as appropriate, to operate the UAS. Part 107 provides greater flexibility to universities and allows them to opt into the civil framework of Part 107 and operate as a civil aircraft under Part 107, so long as the “public” aircraft operation can function under Part 107. No special notice is required to operate in this fashion, the operation must simply comply the Part 107 rules. Consequently, Part 107 has streamlined the process and is the preferred method for university UAS operations, assuming the operations are compatible with the Part 107 framework.

The requirements of Part 107 can be divided into three general categories: (1) UAS equipment; (2) remote pilot requirements; and (3) flight operation.

1. UAS Equipment

- a. Registration: The University must register the UAS, which can be done online and costs \$5.00.
- b. UAS Marking: The UAS must have specific identifying markings.
- c. Airworthiness: While no certification is required, the remote pilot is responsible for preflight checks of the UAS to ensure its safe operation and proper function.

(Continued)

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**DRAFT MOTION 20170328\_6-L: I move emergency approval of the revisions to BOR Policy 1:30 as presented.**

- d. Equipment: The total take off load of the UAS must be less than 55 pounds. The UAS cannot fly faster than 100 mph. The UAS cannot fly higher than 400 feet above ground level.
2. Remote Pilot Requirements
    - a. Remote Pilot Certificate: If the pilot doesn't have a Part 61 pilot certificate, they must take the Aeronautical Knowledge Test and then complete a remote pilot certification application to the FAA.
    - b. Mandatory Accident Reporting: If an accident occurs during a flight operation which results either in \$500 or more of property damage, serious physical injury to a person, or injury to a person who loses consciousness, then the remote pilot in command is responsible for reporting the accident to the FAA within 10 days.
    - c. Insurance: The rules do not mandate insurance, but it would be advisable for all university operations.
  3. Flight Operations
    - a. Where to Fly: Flight in airspace G is permissible without air traffic permission. If the flight involves B, C, D or E controlled airspace, the University needs air traffic control permission.
    - b. No Flight over People: UAS cannot be flown over anyone not directly participating in the operation; however, flight over an uninvolved person is permissible when that person is inside a covered vehicle.
    - c. Visual Line of Sight: UAS must be within visual line of sight of the operator. UAS must yield to all manned aircraft.
    - d. Daylight Operation Only: UAS can only be operated in daylight. If UAS operation is desired between civil twilight (30 minutes before sunrise to 30 minutes after sunset), then anti-collision lighting is required.

If any of these regulations are too restrictive, the University may apply for a waiver for certain of these requirements. Waiver requests can be submitted online and may take up to 90 days for processing.

BOR Policy 1:30, as currently written, does not address UAS operation under Part 107. As such, draft revisions to BOR Policy 1:30 have been prepared to address the implementation of Part 107, in addition to adjusting the policy to align with the new BOR policy template (see Attachment D). The proposed changes have been vetted through RAC, BAC and COPS with no negative feedback. Because Part 107 offers a more efficient and streamlined process for university UAS operations, emergency approval is sought pursuant to Section 5.5.1 of the BOR By-Laws to expedite the alignment of BOR Policy 1:30 with current best practice.

# SOUTH DAKOTA BOARD OF REGENTS

## Policy Manual

**SUBJECT:** Unmanned Aircraft Systems (~~UAS~~-Policy)

**NUMBER:** 1:30

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### A. PURPOSE

~~The Board permits the use of unmanned aircraft systems (UAS) to support administrative, research, instructional, and service functions of the institutions.~~ To provide for the requisite oversight and authority for the operation of UAS, guidance concerning the appropriate operation of and uses for UAS, ~~relating to academic endeavors~~ and to protect them from abuse and from unlawful or other misuse.

### B. DEFINITIONS

1. **Certificate of Authorization (COA):** Pursuant to Federal Aviation Administration (“FAA”) regulations, the COA is an authorization issued by the Air Traffic Organization to a public operator for a specific UAS activity.
2. **Civil Operations:** Any UAS operations that are not “public operations” are civil operations. All UAS operations for commercial purposes, including university business, teaching and research, unless otherwise noted herein, are civil operations.
3. **Institutional Airspace:** Includes that portion of the air space between the surface of the ground and 300 feet above the ground or above a building or structure erected on the university property.
4. **Institutional UAS Use:** Any UAS operation by university employees or students as part of their university employment or as part of a university program.
5. **Model Aircraft:** UAS that is (1) flown for hobby or recreational purposes, per section 336(c) of the FAA Modernization and Reform Act of 2012 and any amendments thereto; (2) capable of sustained flight in the atmosphere; and (3) flown within visual line of sight of the aircraft operator. Model aircraft must not exceed 55 pounds and require FAA registration and appropriate marking prior to any flight operation.
6. **Part 107:** FAA final rule on Operation and Certification of Small Unmanned Aircraft Systems, 49 CFR Part 107 and any amendments thereto. This rule governs civil operations of small UAS weighing less than 55 pounds by a Remote Pilot in Command or under the direct supervision of a certified Remote Pilot. Part 107 does not apply to model aircraft.
7. **Private UAS Use:** All UAS operation that is not institutional UAS use, which includes model aircraft.
8. **Public Operations:** Include those aircraft owned and operated by government or public entities for governmental purposes and which are not operated under Part 107.

**9. Section 333 Exemption:** FAA exemption from certain approval requirements based on Section 333 of the FAA Modernization and Reform Act of 2012 and any amendments thereto, which grants the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAS to operate safely in the National Airspace System.

**10. Unmanned Aircraft Systems (“UAS”):** Unmanned aircraft and their associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to safely and efficiently operate the unmanned aircraft.

## **C. POLICY**

### **1. Compliance with Federal Aviation Administration Regulations**

~~The FAA Federal Aviation Administration (FAA) has jurisdiction over all navigable airspace in the United States. The mission of the FAA is to ensure the safe and efficient management of the national airspace system (NAS). All aircraft, whether manned or unmanned, are subject to FAA rules and regulations. The FAA classifies all aircraft operated by entities as belonging to one of two categories of operation: public or civil. Public UAS operations include those aircraft owned and operated by government or public entities for governmental purposes. All other UAS operations are considered civil. UAS operated by individuals for hobby or recreational purposes are considered model aircrafts. Model aircraft operations do not generally require special FAA approval, so long as they adhere to certain statutory parameters. Ownership and use of UAS by entities do not generally fall within these parameters. All university employees, students and visitors are responsible for complying with FAA regulations, state and federal laws, and university policies with respect to private UAS use in institutional airspace or institutional UAS use.~~

### **2. Establishment of Institutional Administration**

Each institution that intends to operate UAS shall develop, implement and administer specific policies and procedures as necessary to comply with this policy and the requirements of state and federal law and designate an institutional office to assume responsibility for overseeing institutional UAS compliance. The designated institutional office’s responsibilities shall include, but are not limited to, providing oversight and approval of institutional UAS use under Part 107, administering requests to pursue a COA or Section 333 exemption on behalf of an institutional unit, and ensuring compliance of institutional UAS use operating under a COA or Section 333 exemption.

### **3. Institutional UAS Use**

Institutional UAS use must be conducted under Part 107 or by obtaining a Section 333 exemption or COA from the FAA. Any institutional UAS use permissible under Part 107 shall be considered a Civil Operation and governed by Part 107 unless the designated institutional office determines that a COA or Section 333 exemption is necessary and appropriate. Prior to granting approval for any institutional UAS use the designated institutional office must: (1) ensure the UAS operation is authorized under Part 107, a Section 333 exemption, or a COA; (2) obtain adequate insurance coverage; (3) ensure each person controlling the UAS has received the requisite training, certification or licensure;

and (4) establish and document such additional training, maintenance, logging and control procedures as may be required under FAA policy and guidance. ~~Model aircraft operated for hobby or recreational purposes by individuals or other UAS devices may not be operated over institutional grounds without prior permission, and may never be operated in ways that interfere with the use of institutional grounds.~~

### **1. Establishment of Institutional Administration**

~~Each institution that intends to operate a UAS will designate an institutional office to assume responsibility for overseeing institutional UAS compliance. The institutional office will be responsible for handling requests to pursue a COA or § 333 exemption on behalf of an institutional unit. Where the cognizant institutional administrators determine that the investment in the technology, its operation and maintenance is justified, the institutional office will be responsible for making arrangements to submit applications, obtain insurance coverage, train operators and assemble the necessary operations manuals and record keeping systems. Upon receipt of authorization from the FAA, the institutional office will be responsible for monitoring institutional compliance with FAA training, operations, maintenance, record keeping and other regulatory requirements.~~

### **4. Institutional UAS Use Pursuant to Part 107**

Any institutional UAS use permissible under Part 107 may be declared a Civil Operation and conducted in accordance with Part 107. Authorization to fly may be given by the designated institutional office upon completion of the documentation necessary to demonstrate compliance with the provisions of this policy and with the Part 107 pre-flight requirements. Operators must comply with all Part 107 requirements and restrictions, except to the extent that a waiver has been granted by the FAA and approved by the designated institutional office. The FAA summary of the Part 107 parameters is set forth in Appendix A.

### **2.5. Institutional UAS Usage Pursuant to a Certificate of Authorization COA**

The FAA may grant permission to institutions to operate UAS, so long as their use qualifies as a government function under 49 USC §40125 and any amendments thereto. ~~In order for an administrative unit within the institution~~ If an institution intends to operate UAS for a government function that cannot be conducted under Part 107, the institution must apply for and be granted a Certificate of Authorization (COA) from the FAA to enable operation of a UAS. *Government uses for purposes of the COA include research in furtherance of core governmental functions, institutional security, facilities maintenance, institutional relations and activities provided to the public at no cost incidental to an institution's public service mission.*

The designated institutional office shall be responsible for determining if institutional UAS use conducted outside of Part 107 is necessary and appropriate, and if so, for pursuing a COA for such activity. COAs are only available to government agencies or public entities for operations that are considered public ~~aircraft~~ operations. *COAs cannot be granted to public institutions for education or training since these applications are considered commercial in nature.* A COA is granted to the institution, not to individuals. Data acquired through the use of the UAS belongs to the institution and not to the individual.

## ~~2.1. Requirements Institutions must meet in order to use UAS for government uses:~~

- ~~2.1.1. Institutions must obtain a COA from the FAA for governmental uses or other FAA exceptions or authorizations prior to use;~~
- ~~2.1.2. Insurance Coverage is obtained;~~
- ~~2.1.3. Each person controlling the UAS must receive Operator Training; and~~
- ~~2.1.4. Each institution must establish and document such additional training, maintenance, logging and control procedures as may be required under FAA policy and guidance.~~

## ~~2.2. Overview of COA Process~~

~~Due to the potential legal and risk management issues involved in managing a COA, a two-step process must be followed for institutional administrative units~~the designated institution office must conduct due diligence, considering the need, any available alternative(s) and the pros and cons associated therewith, prior that wish seeking to apply for a COA for government purposes.

### ~~STEP ONE:~~

~~A brief narrative must be completed detailing the following:~~

- ~~i. Nature of institutional function supported by the use of a UAS and goals of the work to be undertaken;~~
- ~~ii. Need for a UAS;~~
- ~~iii. Type of UAS to be utilized and the manner in which it/they will be operated;~~
- ~~iv. Type of data to be collected and plan for collected data;~~
- ~~v. Person(s) who will be operating the UAS and proof of training;~~
- ~~vi. Schedule of the activities to be undertaken; and~~
- ~~vii. Sources and nature of financial support when appropriate~~

~~Much of this information is required for the COA, this information may be duplicated from the information put in the COA.~~

### ~~STEP TWO:~~

~~An internal application checklist must be completed to ensure the UAS will be operated within the COA framework. The checklist includes:~~

- ~~i. Completion of the brief narrative of Step One;~~
- ~~ii. Review of justifications for data collection (including instrumentation and project goals);~~
- ~~iii. Creation and maintenance of logs of all flights and all data files collected;~~
- ~~iv. Creation and maintenance of operator file(s) with proof of training;~~
- ~~v. Copy of completed and approved COA; and~~
- ~~vi. Proof of insurance~~

## **6. Institutional Usage of UAS UAS Use pursuant to a Section § 333 Exemption**

**~~from general rules governing civil aviation.~~**

~~FAA regulations do not currently allow UAS operation for nongovernmental civil (commercial) purposes. Any aircraft operation in the national airspace requires a certificated and registered aircraft, a licensed pilot, and operational approval through an exemption petition process. Any institution wishing to engage in civil operations that are not permissible under Part 107 must pursue a Section 333 exemption. The designated institutional office shall be responsible for determining if institutional UAS use conducted outside of Part 107 is necessary and appropriate, and if so, for pursuing a Section 333 exemption for such activity.~~

~~Section 333 of the FAA Modernization and Reform Act of 2012 grants the Secretary of Transportation the authority to determine whether an airworthiness certificate is required for a UAS to operate safely. When a petitioner has demonstrated that adequate safety measures are in place, the FAA may grant an exemption that would allow UAS operation for commercial purposes. Commercial purposes involve uses including, but not limited to: education, training, marketing, news, promotional research, and public service.~~

**2.3. Requirements Institutions must meet in order to use UAS for commercial purposes:**

~~2.3.1. Institutions must obtain a § 333 exemption for civil operations by demonstrating that the UAS can be operated safely within an assigned area and cause no harm to the public;~~

~~2.3.2. Insurance Coverage is required;~~

~~2.3.3. Each person controlling the UAS must receive Operator Training and be a licensed pilot; and~~

~~2.3.4. Each institution must establish and document such additional training, maintenance, logging and control procedures as may be required under FAA policy and guidance~~

**3. Private use of Model Aircraft UAS Use and UAS Usage within institutional airspace**

**4.7.**

~~Model aircraft operated for hobby or recreational purposes by individuals or other UAS devices may not be operated over institutional grounds without prior permission, and may never be operated in ways that interfere with the use of institutional grounds.~~

All private UAS use in institutional airspace requires prior approval and may not interfere with the use of institutional grounds. If an institution has not designated an institutional office to oversee UAS compliance, permission to use drones for private UAS use within institutional airspace may shall be requested through the institutional offices that administer requests for private use of institutional facilities.

The following restrictions apply to the time, place, and manner ~~private model aircraft or UAS devices of~~ private UAS use ~~are operated:~~

**4.1.7.1.** Only with prior permission;

**4.2.7.2.** Only during daylight hours;

**4.3.7.3.** Within full view and control of operator;

~~4.4.7.4.~~ Not during out-of-door institutional events;

~~4.5.7.5.~~ Not over outdoor athletic facilities or any portion of the campus grounds within a 1,320 foot radius of the facility;

~~4.6.7.6.~~ Not within 300 feet of buildings;

~~4.7.7.7.~~ Not within 150 feet of persons or animals; and

~~4.8.~~ Not in a manner which interferes with ground vehicles or traffic.

~~4.9.~~

~~4.10.7.8.~~

~~For purposes of this section, institutional airspace includes that portion of the air space between the surface of the ground and 300 feet above the ground or above a building or structure erected on the property.~~

~~For purposes of this section, all use other than use by the institution is private use. Students, student organizations, employees or employee organizations may use model aircraft or UAS only with permission first obtained.~~

### **5.8. UAS Compliance with Other Policies**

This policy is to be read in conjunction with institutional policies regarding conduct while on institutional grounds and utilizing institutional resources.



**FORMS/APPENDICES:**

[Appendix A \(FAA News – June 21, 2016\)](#)

**SOURCE:**

BOR March-April 2015; [BOR March 2017](#).