

**HUMBOLDT STATE UNIVERSITY**  
**POLICY ON THE USE OF**  
**UNMANNED AIRCRAFT SYSTEMS (UAS)**  
**MAY 1, 2015**

**PURPOSE**

To provide guidance concerning the appropriate use of Unmanned Aircraft Systems (UASs; <http://www.faa.gov/uas/>) related to research endeavors at Humboldt State University (HSU).

**BACKGROUND**

Unmanned Aircraft Systems offer great potential as tools for research and teaching. The use of UASs offer faculty, staff, and students at HSU valuable opportunities to acquire data inexpensively in a wide range of disciplines including, but not limited to, Applied Physics, Computer Science, Forestry and Wildland Resources, Wildlife, Global Spatial Analysis, Geology, Geography, Environmental Science, and Mathematics. In addition to experience associated with programming/flying UASs, student researchers benefit from the design, selection, and operation of data sensors and from the post-processing and analyses of sensor data. The use of UASs provides student researchers and faculty access to data that may enhance research projects within existing courses (e.g. environmental monitoring, image processing, pattern recognition, electronic instrumentation), enable undergraduate capstone and Master's thesis projects, and permit research that answers significant questions.

**POLICY**

**Accountability**

The Provost / Vice President for Academic Affairs is responsible for the implementation and enforcement of this policy.

**Applicability**

This policy applies to powered aircraft operated without a human pilot onboard, by HSU faculty, staff, university volunteers, or students, in the course of scholarly endeavors. Commercial use of these aircraft on and off campus by those who represent HSU during the use of the aircraft is expressly prohibited.

## **Unmanned Aircraft Systems**

Unmanned Aircraft Systems used under the provisions of this policy must be public aircraft as defined by the Title 14 Code of Federal Regulations Subchapter 1.1

### **Protocol**

Prior to deployment of any UAS by HSU faculty, staff, students, or volunteers, operators must have an HSU approved *Flight Operations Plan*. To obtain the Flight Operations Plan, operators submit a Flight Operations Proposal to the UAS Review Committee (see below). Once approved, the Flight Operations Proposal serves as the Flight Operations Plan. Operations involving UASs without a Flight Operations Plan are in violation of this policy; approval for flight operations cannot be made retroactively. Operating a UAS without a Flight Operations Plan may result in administrative action in accordance with the HSU Policy on Research Misconduct.

### **UAS Review Committee**

The UAS Review Committee is [a presidentially-appointed committee](#) composed of the Director of Risk Management (or designee), [the Director of Environmental Health & Occupational Safety \(or designee\)](#), the Dean of Research ([chair, ex officio or designee](#)), ~~and the University Chief of Police (or designee)~~, [one Academic Dean, one faculty member from each of the academic colleges, and one member from the campus community who holds a pilot's license.](#) ~~In addition, the UAS Review Committee will have one elected faculty member from each academic college. Lastly, the Provost will appoint one academic Dean, and one member from the campus community who holds a pilot's license.~~

The UAS Review Committee is responsible for the review, approval and oversight of UAS operations at HSU. An approval from the UAS Review Committee provides a minimum level of assurance that the operators are aware of the additional permitting requirements (i.e., FAA), and are prepared and capable of operating the UAS safely and responsibly. Only approved UAS Review Committee operations are covered in this policy.

***Flight Operations Proposals.***— Submission of a Flight Operations Proposal should be the first step in any instructional, research endeavor or other project using UAS (e.g. before submission to Research and Sponsored Programs, Curriculum Committee, IRB, etc.). Similarly, a Flight Operations Proposal must be submitted by the Principal Investigator (PI) or faculty member to the UAS

Review Committee prior to any acceptance of materials or funding for any operations of UASs. The Flight Operations Proposal must be approved by the UAS Review Committee as a Flight Operations Plan before the aircraft can be deployed.

**Operations Logs.**--Operations logs must include launch and landing dates, flight times, locations, approximate flight paths, altitudes, a brief qualitative description of the data collected, and the names of HSU staff, faculty, student researchers, volunteers, and administrators involved. Pilots must possess the Flight Operation Plan, operation logs, and any documentation which the law may require during the deployment of the UAS. The UAS Review Committee may review this material at any time.

All accidents that result in vehicle repair, property damage or injury must be documented in operations logs for each UAS. Accidents involving injury and/or property damage (excluding the UAS) *must* be reported to the UAS Review Committee within 24 hours of the incident.

**Summary Report.**-- A summary report at the conclusion of an approved UAS Flight Operations Plan must be filed with the UAS Review Committee within 30 days of the expiration date. UAS operators who fail to file a summary report will not be approved for new Flight Operations Proposals until their summary reports are current.

### **Data Storage and Use**

Data collected by HSU UASs will be limited. The use of UASs will be largely related to research activities such as, but not limited to, flora and fauna inventories and identification; hyperspectral vegetation mapping; tracking mobile telemetry affixed to animals; tracking of anonymous vehicle counts/activity on public lands/waters; geological and geophysical mapping. Only approved research and educational projects may collect data under the auspices of HSU. Furthermore, the UAS, and all data collection instruments installed on each must have university property tags for tracking purposes, and designated campus storage locations identified in the Flight Operations Plan. Data collected using UASs that don't adhere to these guidelines, are in violation of any federal, state, or local law, or that are not approved by the UAS Review Committee cannot be published with an HSU affiliation. Collection of such data without prior approval may be construed as research misconduct. Any data sharing or distribution is the responsibility of the PI or faculty member and should generally be publically available within one year of the data collection flight or termination of the data

collection project.

This policy prohibits the unlawful photography and surveillance on public or private property. As such, the PI or faculty member for a project will perform due diligence to ensure proper use of the data as specified by this policy and local, state, and federal regulations. This includes data review by an individual designated by the PI or faculty member to eliminate sensitive, compromising, or otherwise inappropriate material (e.g. attributes that identify individuals such as, but not limited to, recognizable faces, license plate numbers on vehicles, etc.) before data are distributed for analysis, stored on a server with broader access, or made public in any way. When a UAS is operated in conjunction with a partner agency (e.g., County, State, Federal or NGO), and the agency has first access to the data, the agency will perform the prescribed due diligence.

### **Maintenance and Storage of Equipment and Instrumentation**

The maintenance, storage and preparation of UASs operated and owned by HSU or the Sponsored Programs Foundation will be conducted by an academic program area. This responsibility rests with the faculty, staff, student researchers, or volunteers, named in the Flight Operations Plan.

Aside from any fixed, onboard systems (i.e., temperature loggers, GPS, barometers, navigation cameras), the maintenance (including calibration) of any sensor instrumentation is the responsibility of the PIs or faculty who filed the Flight Operations Plan.

The Provost or designee may review and modify assignment of responsibilities for the maintenance and storage of UASs and UAS equipment as needed. Any university-owned UAS and related support equipment will be stored in appropriate facilities designated in the approved Flight Operations Plan.

### **Compliance with Applicable Regulations and Law**

The UAS Review Committee and UAS operator are responsible for compliance with all relevant FAA regulations. When required, *A Certification of Agreement* from the FAA for operation of UAS must be obtained prior to flight operations.

### **Flight Operation Procedures**

Prior to commencing flight operations, the UAS operator must have in possession the appropriate procedures and any documentation to ensure safe, legal and appropriate operation. During flight operations of the aircraft, pilots must have in their position documentation that includes but may not be limited to the

following:

- a. Flight Operations Plan approved by the UAS Review Committee Review
- b. Current operations logs of all flights and all data files collected
- c. Proof of access to public or private property associated with flight operations

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## References

Federal Aviation Administration Unmanned Aircraft Systems FAQ page -

[http://www.faa.gov/about/initiatives/uas/uas\\_faq/](http://www.faa.gov/about/initiatives/uas/uas_faq/)

Federal Aviation Administration Unmanned Aircraft Systems fact page -

[http://www.faa.gov/news/fact\\_sheets/news\\_story.cfm?newsId=14153](http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153)

State Unmanned Aircraft Systems (UAS) Legislation

<http://www.ncsl.org/research/civil-and-criminal-justice/2014-state-unmanned-aircraft-systems-uas-legislation.aspx>

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