HUMBOLDT STATE UNIVERSITY
University Senate

Resolution on Humboldt State University Policy on the Use of Unmanned Aircraft Systems (UAS)

06-19/20 – UPC – December 10th, 2019 – General Consent

RESOLVED: That the University Senate of Humboldt State University (HSU) recommends to the President that HSU adopt the attached updated policy on the use of unmanned aircraft systems (UAS); and be it further,

RESOLVED: That the attached updated policy will supersede HSU Policy Number P15-01.

RATIONALE: The primary changes to the UAS policy are due to HSU letting the Certificate of Waiver or Authorization (COA) expire and operating instead under Federal Aviation Administration (FAA) Part 107. The Chancellor's Office approved HSU operating under Part 107 on July 14, 2017. As of July 14, 2017, the use of UAS related to research endeavors at HSU may be requested under FAA Part 107. One of the main benefits of operating UAS under Part 107 is that it requires the drone operator to have a "Remote Pilot Airman Certificate," which is less of a burden to achieve than having an "FAA private pilot ground instruction" and completing an "FAA private pilot written examination" that is required under the COA.

HUMBOLDT STATE UNIVERSITY

Humboldt State University Policy on the Use of Unmanned Aircraft Systems (UAS)

Applies to: Faculty, Staff, Students

Supersedes: P15-01

Purpose of the Policy: 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).

Policy Details:

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

UAS Review Committee:

The UAS Review Committee is a presidentially-appointed committee composed of a broad representation of HSU, whose members could include the following: the Director of Risk Management (or designee), the Director of Environmental Health & Occupational Safety (or designee), the Dean of Research (or designee), the University Chief of Police (or designee), faculty members from any of the academic colleges, and one member from the campus community who holds a pilot's license. The President or Provost will appoint the Chair of the committee.

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.

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. The approved Flight Operations Proposal serves as the Flight Operations Plan.

Operating a UAS without a Flight Operations Plan violates this policy and may result in administrative action, including in accordance with the HSU Policy on Research Misconduct.

Application Procedure—The following steps outline the process to gain approval to use UASs for research:
1. The Principal Investigator (PI) develops the Flight Operations Proposal (see below) and submits it to the UAS Review Committee for campus approval;
2. A certified pilot needs to be part of the proposal.

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) 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.

Flight Operations Proposals should minimally address the following elements:
a) Purpose, nature (research, instruction, other) and goals of the work to be undertaken,
b) Need for a UAS
c) Type of vehicle(s)/equipment to be utilized and the manner in which it/they will be operated,
d) The identity of pilot(s) or other remote operator(s),
e) Dates/Schedule of activities to be undertaken,
f) Locale(s) and flight plan for operations,
g) All forms of data (including imagery) to be collected,
h) Provisions for security of the equipment, both during and outside of operation, and of any sensitive data collected,
i) Sources and nature of financial support, if appropriate,

j) Communications plan for notifying campus police, and local landowners and police agencies, as appropriate, in the overflight radius of planned operations each time a UAS is flown,

k) Written affirmation that the UAS will be used only for noncommercial, research purposes,

l) Confirmation that application is under Part 107, and

m) Description of designated campus storage locations, university property tag numbers, and FAA registration number.

Careful consideration should also be given to other issues such as airworthiness, training, and access to requisite personnel, such as qualified visual observers and pilot/operators.

Flight Operations Logs—All PIs must maintain an up-to-date flight operations log while using UASs. 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 that 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) or major UAS damage ***must*** be reported to the UAS Review Committee within 24 hours of the incident.

Summary Report—A summary report as part of an approved UAS Flight Operations Plan must be filed with the UAS Review Committee at the end of each month. 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

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 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
All UASs must be registered with the Office of Research, Economic, and Community Development.

The physical 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.

Insurance
Prior to beginning operations, appropriate insurance coverage should be obtained for registered UASs. Information on obtaining insurance can be obtained from the Office of Research, Economic, and Community Development.

Compliance with Applicable Regulations and Law

The UAS Review Committee and UAS operator are responsible for compliance with all relevant FAA regulations. Both the applicant and the campus should ensure that the proposed UAS operations

- Comply with applicable laws, government regulations, and University policies,
- Do not pose a threat to health, safety, privacy, or the environment,
- Include appropriate steps to manage and mitigate associated risks, and
- Serve the mission of the University and interests of the public at large

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. FAA Remote Pilot Certificate
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

History

Issued: 05/2015, Policy Number P15-01
Revised: 04/16/2019
Edited: MM/DD/YYYY
Reviewed: MM/DD/YYYY

Updated: March 8, 2018

HUMBOLDT STATE UNIVERSITY
POLICY ON THE USE OF
UNMANNED AIRCRAFT SYSTEMS (UAS)
JUNE 28, 2018~~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. The use of UASs offers 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.

While the use of UASs has enormous research potential, their use requires approval of the Federal Aviation Administration (FAA) as this agency controls all navigable airspace within the United States. All aircraft, under the FAA, are classified as either public aircraft or civil aircraft. A public aircraft is one that is owned and operated by the United States government or the government of a state, the District of Columbia, or a territory or possession of the U. S. or a political subdivision. The FAA can allow public universities to operate UASs for governmental research functions. ~~In order to gain FAA approval to conduct research using UASs, the University must apply for and be granted a Certificate of Authorization (COA) from the FAA. Note that COAs are granted to the University, not to individuals.~~ Effective August 29, 2016, the FAA amended its regulations to allow the operation of small unmanned aircraft systems and the certification of their remote pilots under FAA Part 107.

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

UAS Review Committee

The UAS Review Committee is a presidentially-appointed committee composed of a broad representation of HSU, whose members could include the following: the Director of Risk Management (or designee), the Director of Environmental Health & Occupational Safety (or designee), the Dean of Research (or designee), (chair, ex officio), the University Chief of Police (or designee), one Academic Dean, one faculty members from each any of the academic colleges, and one member from the campus community who holds a pilot's license. The President or Provost will appoint the Chair of the committee.

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.

Protocol

Prior to deployment of any UAS by HSU faculty, staff, students, or volunteers, operators must have an HSU approved Flight Operations Plan and a Certificate of Authorization from the FAA. To obtain the Flight Operations Plan, operators submit a Flight Operations Proposal to the UAS Review Committee. The approved Flight Operations Proposal serves as the Flight Operations Plan.

The Flight Operations Plan serves as the basis for a Certificate of Authorization application to the FAA to allow the use of UASs in research. In order to apply for a COA a public declaration letter must be submitted to the FAA. The Chair of the UAS Review Committee (i.e., the Dean of Research) serves as the President's designee to request a public declaration letter from the CSU Office of General Counsel. This request is addressed to the campus counsel and provides assurances that the applicant is a part of the state government, and that the UAS will be used as a public aircraft for a governmental function and will not be used for commercial purposes. The letter request includes a detailed description of the type of UAS to be used, the specific purpose(s), and the geographic location(s) of use.

Operating a UASs without a Flight Operations Plan or a Certificate of Authorization violates this policy and may result in administrative action, including in accordance with the HSU Policy on Research Misconduct.

Application Procedure.—The following steps outline the process to gain approval to use UASs for research:

2

1. The Principal Investigator (PI) develops the Flight Operations Proposal (see below) and submits it to the UAS Review Committee for campus approval;

1.2. A certified pilot needs to be part of the proposal.

2. Upon approval of the Flight Operations Proposal, by the UAS Review Committee, the Chair of the Committee requests a public declaration letter from the CSU Office of General Counsel;

3. Upon FAA approval of the letter of declaration, the PI applies for the COA

4. Upon receipt of the COA from the FAA, the PI may use the UAS according to the approved provisions in the COA.

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) 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.

Flight Operations Proposals should minimally address the following elements:

(a) Purpose, nature (research, instruction, other) and goals of the work to be undertaken,

(b) Need for a UAS

(c) Type of vehicle(s)/equipment to be utilized and the manner in which it/they will be operated,

(d) The identity of pilot(s) or other remote operator(s),

(e) Dates/Schedule of activities to be undertaken,

(f) Locale(s) and flight plan for operations,

(g) All forms of data (including imagery) to be collected,

(h) Provisions for security of the equipment, both during and outside of operation, and of any sensitive data collected,

(i) Sources and nature of financial support, if appropriate,

(j) Ceommunications plan for notifying campus police, and local landowners police agencies, as appropriate, in the overflight radius of planned operations each time a UAS is flown., and

(k) Written affirmation that the COA UAS will be used only for noncommercial, research purposes..
(l) Confirmation that application is under Part 107, and
(m) Description of designated campus storage locations and university property tag numbers.

Careful consideration should also be given to other issues such as airworthiness, training, and access to requisite personnel, such as qualified visual observers and pilot/operators.

Certificate of Authorization. Application for the Certificate of Authorization is an online process that requires an FAA approved public letter of declaration before gaining access to the site.

Flight Operations Logs.—All PIs must maintain an up-to-date flight operations log while using UASs. 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~~ that 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) or major UAS damage **must** be reported to the UAS Review Committee within 24 hours of the incident.

Summary Report.-- A summary report as part ~~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~~ at the end of each month. 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

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 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

All UASs must be registered with the Office of Research, Economic, and Community ~~and~~ Development.

The physical 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.

~~Document Retention~~Insurance

~~Copies of the COA will be maintained in the Office Research, Economic, and Community Development. Following COA approval and p~~Prior to beginning operations, appropriate insurance coverage should be obtained for registered UASs. Information on obtaining insurance can be obtained from the Office of Research, Economic, and Community Development.

Compliance with Applicable Regulations and Law

The UAS Review Committee and UAS operator are responsible for compliance with all relevant FAA regulations. Both the applicant and the campus should ensure that the proposed UAS operations

- Comply with applicable laws, government regulations, and University policies,
- Do not pose a threat to health, safety, privacy, or the environment,
- Include appropriate steps to manage and mitigate associated risks, and
- Serve the mission of the University and interests of the public at large

~~A Certification of Authorization 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. FAA Remote Pilot Certificate ~~Certificate of Authorization from the FAA~~
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

~~**References**~~
~~Federal Aviation Administration Unmanned Aircraft Systems FAQ page - 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~~

~~State Unmanned Aircraft Systems (UAS) Legislation http://www.ncsl.org/research/civil-and-criminal-justice/2014-state-unmanned-aircraft-systems-uas-legislation.aspx~~

~~COA Application Guidelines, Office of the Chancellor, CSU – See Appendix~~