

UAV Operations at the Purdue Agricultural Centers (PACs)

The primary use of UAVs at PACs is for agriculture research but other student/faculty UAV projects can use PACs with special permission. Student projects with UAVs < 5 lbs. should use the AMA field in Lafayette, unless directly related to project located at a PAC.

The purpose of this document is to specify the rules for UAV operation and the procedures for obtaining permission to fly at PACs. The Document contains

- Risk Management Drone/UAS Procedures
- Rules
- Request for Permission to Fly
- PACs UAV Vehicle Safety Data
- Flight Operations Procedure
- Accident Report Form
- AMA Safety Rules

Risk Management Drone/UAS Procedures

Purdue University's Office of Risk Management has put in place a process to register Purdue owned drones/UAS to insure they are covered under our insurance policies. Part of this policy also applies to areas hiring out aerial work to commercial operators. Risk Management will need to be notified and provided proof of insurance and a commercial operating license for any outside entity doing work for you.

Please familiarize yourself with our Operating Procedures.

[http://www.purdue.edu/business/risk_mgmt/pdf/Drone UAS Operating Procedure 4-3-18.pdf](http://www.purdue.edu/business/risk_mgmt/pdf/Drone_UAS_Operating_Procedure_4-3-18.pdf).

Once you have reviewed the procedures and completed the requirement the below link will take you to our notification form. This needs to be fully filled out to insure you adhere to our policy.

[http://www.purdue.edu/business/risk_mgmt/pdf/UAS Notification Form](http://www.purdue.edu/business/risk_mgmt/pdf/UAS_Notification_Form)

[Updated 4-3-18.pdf](#)

Purdue Contact: Dave Truett
Office of Risk Management
dtruett@purdue.edu
765-496-7440

http://www.purdue.edu/business/risk_mgmt/

Rules

- Pilots must possess 107 remote pilots license
- Aircraft must be registered
- Submit information to Purdue Risk Management as required
- Maximum Weight 55 lbs.
- Maximum altitude 400 ft. above ground level
- An experienced Pilot in Command (PIC) and at least one spotter are required for all flights
- Aircraft always within line of sight of the PIC and spotter
- A safe spectator area must be designated
- Contact the appropriate PAC Superintendent for current maps of available areas that might be flown and known obstructions or restricted air space.
- Do not fly over or close to farm workers or other personnel
- Never enter a researcher's plot without permission. Never!
- Emergency Procedures
 - Call 911 for local emergency personnel
 - Contact the PACs Superintendent
- In the event of a crash, the recovery protocols are:
 - Outside PACs Boundaries
 - Obtain owner's permission before trespassing on their property
 - Within PACs boundaries
 - If it is inside another researcher's plot obtain their permission before recovering
 - If it is within you designated areas, recovery all the pieces and debris
 - Lost within high corn or other vegetation.
 - Mark the area of the crash and contact the PACs Superintendent
 - In all cases, file an accident report with the Superintendent
- In the event of "loss of Link" for a manual controlled aircraft, the aircraft must go to "fail safe" mode and circle over PACs property until the link is recovered or power runs out.
- In the event of a "FLY AWAY" of a UAV under autopilot control:
 1. Take manual control through the radio control transmitter
 2. Take manual control through Ground Station Control

3. Initiate loss of link strategy by circling over PACs property until the link is recovered or power runs out

Contact the appropriate PAC Superintendent for current maps of available areas that might be flown and known obstructions or restricted air space.

Request for Permission to Fly a UAV at PACs

I have read and accept the rules and procedures for flying a UAV at PACs. Attached are the required **PACs UAV Vehicle Safety Data** form and an image of the UAV. Please submit this to the appropriate PAC superintendent. For operations at the Rice Farm, please send to the PPAC Superintendent. For operations at the Hostetler Farm, please send to Stephen Hawkins or Jon Leuck. This information will be on file for one year and the information utilized for our reporting purposes.

Name _____

Signed _____ Date _____

PACs UAV Vehicle Safety Data

Please fill out this form once each year or if a new UAV is being used. Include a picture of the aircraft and identifying characteristics, i.e. brand, serial number, model number, & registration number and submit to the appropriate PAC superintendent. For operations at the Rice Farm, please send to the PPAC Superintendent. For operations at the Hostetler Farm, please send to Stephen Hawkins or Jon Leuck.

Name: _____ Phone _____ Email: _____

Purpose of UAV operation

Name of PIC; (Pilot-in-Control)& cell #	
UAV MANUFACTURER & MODEL	
UAV CONTROLLER MANUFACTURER & MODEL	
FLIGHT DURATION	
GROSS TAKEOFF WEIGHT	
Wing Span	
ENGINE TYPE CHOICES: 1) Electric, 2) Air/Fuel Combustion	
FUEL VOLUME	
IF USING FUEL, FUEL TYPE: 1) Gas/Oil mix, 2) Gas, 3) Propane, 3) Kerosene	
POWER SYSTEMS (any that apply & indicate voltages): 1) Ni-Cad, 2) Lithium, 3) Nickel-Metal Hydride	
MANUAL CONTROL OPERATING FREQUENCY	
HOW CONTROLLED? (radio operated control or autonomous flight)	
AUTOPILOT OPERATING FREQUENCY	
VIDEO DOWNLINK FREQUENCY	
OTHER DOWNLINK FREQUENCIES	
MISSION PROFILE 1) Max operating altitude (ft.) (400 ft. is the max) 2) Max operating range (ft.)	
A/C MAX SPEED	
OPERATOR TRAINED? (yes, no, or trainee)	
OTHER ITEMS	

Flight Operations Procedure

Pilots and or PIs are required to contact the appropriate PAC superintendent before traveling to a PAC to conduct a flight. Please confirm that flights may take place before traveling to a PAC.

Before flying, contact the appropriate superintendent via telephone and/or email, fill out this form and post it on the bulletin board in the appropriate PAC office/shop building. Check the bulletin board for any conflict of operations in the flight area. If there is a conflict, contact the PACs Superintendent. This information will be on file for one year and the information utilized for our reporting purposes. For operations at the Rice Farm, please send to the PPAC Superintendent. For operations at the Hostetler Farm, please send to Stephen Hawkins or Jon Leuck.

DATE _____

Name: _____ Phone _____ Email: _____

Purpose of this UAV flight operation

Do you have permission to fly at PACs _____

Over what regions within PACs will you be flying _____

What is your estimated start time _____ finish time _____

Pilot In Charge _____ Cell # _____

Spotter _____ Cell # _____

Accident Report

PACs UAV Operation

Pilot In Charge Name: _____ Phone _____ Email: _____

Date: _____ Time: _____ Location: _____

Weather conditions:

Spotter Name: _____ Phone _____ Email: _____

Date: _____ Time: _____ Location: _____

Equipment: _____

Observer and other personnel on site; Duties during flight:

Description of accident, include information of injury to personnel and/or property :

Cause of accident:

Remedial actions to prevent future accident:

Date: _____ Signature: _____