How to Start a UAS Capability at a USGS Center

Paperwork Needed

- For acquisition of an aircraft (UAS) under the $15,000 asset threshold, the Dept. of the Interior UAS Acquisition Request Form (OAS-13U) is used (see Appendix A of the OPM-11). This 4-page form is to be completed by the requesting Center and signed by:
    - ✓ Your specific USGS Center Director or Manager
    - ✓ The USGS National Aviation Manager (Bill Christiansen, wdchrist@usgs.gov)
    - ✓ The Director of the DOI Office of Aviation Services (Mark Bathrick)
- For acquisition of an aircraft (UAS) over the $15,000 asset threshold, an Aviation Business Case (ABC) will be required, as described in OPM-08 https://www.doi.gov/sites/doi.gov/files/uploads/opm-08.pdf

Initial UAS Training

- Potential DOI Remote Pilot candidates must meet the following requirements:
    - ✓ Obtain FAA Remote Pilot Certificate – candidate must pass the FAA Part 107 knowledge test
      FAA Testing locations: https://drone-registration.net/part-107-faa-testing-centers/
    - ✓ Complete DOI OAS A-450 Basic Remote Pilot Course
        - Coordinate attending a class with the USGS National UAS Project Office (Jeff Sloan).
        - Complete online DOI Interagency Aviation Training (IAT) – Classes include:
            - A-100 Basic Aviation Safety
            - A-110 Aviation Transportation of Hazardous Materials
            - A-200 Mishap Review
            - A-203 Basic Airspace
        - Attend the one week (40hrs) A-450 training at scheduled location (varies). This includes classroom time, hands-on flying, testing and credentials.
- Supervisors of Remote Pilots complete online DOI Interagency Aviation Training (IAT) – Classes include:
    - ✓ A-200 Mishap Review
    - ✓ M-3 DOI Aviation Management Training for Supervisors
- Remote Pilot must stay current with actual flying (or on simulator) every 90 days.
    - ✓ Refresher proficiency training will occur every two years and may require two days of travel to regional locations. *Still in development but not required until 2019*.

Procuring UAS

- Procurement of the UAS aircraft (assets less than $15,000) is done by the Office of Aviation Services in Boise, ID. The funding vehicle to move money to OAS for procurement is set up directly between the individual USGS Center and the Office of Aviation Services. The funding vehicle can be in the form of an Interagency Agreement (IAA) or a Fleet Information Document (FID).

- Office of Aviation Services contacts:
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Equipment & Approximate Costs

| 3DR Solo System | GoPro Hero 4 | Ricoh GR 2 | MicaSense Rededge 2 | FLIR Vue Pro R |

Cost Item	Description	Cost
Platform		
3DR Solo	Platform, backpack, 4 batteries	$ 1,000.00
Tablet	Android	$ 300.00
Sensors		
GoPro Hero 4	Camera, battery, charger	$ 450.00
Ricoh GR 2	Camera, battery, charger	$ 700.00
MicaSense RedEdge 3	Camera, downwelling light sensor, case, calibration panel, GPS	$ 5,195.00
FLIR Vue Pro R	Sensor, Gimbal	$ 6,500.00
Custom Mounts		
Ricoh GR 2	Camera mount and plate - 3D printed	$ 80.00
MicaSense RedEdge 3	Camera mount - 3D printed	$ 30.00
Computers		
Workstation		$ 5,700.00
Laptop		$ 4,100.00
Software		
Agisoft Photoscan	Full License	$ 3,500.00
Global Mapper	USGS has Enterprise License	$ 400.00
Pix4Dmapper Pro	Yearly subscription	$ 3,500.00
	Full License	$ 8,700.00
UAS Supplies		
Misc.	Batteries, Chargers, Antennas	$ 4,000.00
Training Estimations		
Initial A-450 Class	40 hrs (including travel, classroom time, hands-on flying (GS-12))	$ 3,500.00
Currency	4 hrs flying or simulator every 90 days	$ 200.00
Proficiency Refresher	16 hrs every 2 years	$ 800.00

Contacts

- USGS National UAS Project Office Contacts:
    - Jeff Sloan   jlsloan@usgs.gov
    - Joe Adams   jdadams@usgs.gov
    - Jill Cress   jjcress@usgs.gov