Department of the Interior
Accident Prevention Bulletin

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Subject: UAS Operations

Area of Concern: Flight Planning and Flight Safety

Distribution: All Aviation Activities

Discussion: The use of Unmanned Aircraft Systems (UAS) in DOI and USFS has grown by leaps and bounds. UAS operations significantly expands our ability to obtain data critical to fulfilling many mission requirements with less cost, less environmental impact and improved safety when used appropriately. UAS have been used in missions involving wildfires, vegetation monitoring, wildlife surveys, law enforcement, hydrology, geological surveys, geophysical surveys, and volcanic monitoring.

One of the most important things to keep in mind is that **UAS are aircraft.** As such, **most of the same rules and regulations relating to their acquisition and operation apply.**

When planning a mission, the first prerequisite is to determine its objective and associated requirements. You'll need to determine if UAS is the correct asset to accomplish the mission as that's not always the case. For UAS operations, the mission will dictate the type of sensor requirements and the sensor requirements will in turn, determine the platform (aircraft type).

Once you've determined that UAS is the appropriate asset for your particular mission, you'll then need to plan and conduct your UAS operation with an equivalent consideration to mishap prevention as a manned aircraft. Planning will probably be more involved since every UAS operating outside of restricted or military controlled airspace requires a Certificate of Authorization (COA) from the FAA . COAs are centrally managed by both DOI and USFS and often contain additional operating restrictions and reporting requirements unique to that operation.

FAA AC 91-57 Model Aircraft Operating Standards (aka the "RC Rule") do not apply to DOI or USFS flight operations and cannot be utilized in lieu of obtaining a COA.

DOI UAS pilots, mission operators and observers must be certified IAW OPM 11. Maintenance inspectors for UAS are required to possess similar qualifications as current OAS inspectors in addition to knowledge of UAS procedures.

Most small UAS (sUAS) are operated in the low level environment which normally require project plans in order to identify hazards and mitigate risk. Assessing some of these hazards can be accomplished by using Tactical Piloting Charts (TPCs), other bureau hazard maps, aerial photos, Google earth, etc.

sUAS operations usually take place in unimproved areas, far from any established airfields. As a result, it's the operators responsibility to ensure adequate safeguards such as "clear zones" around the vehicle and its intended flight path are implemented and briefed prior to every mission. Providing a mechanism for assuring compliance will be just as important as there's a good chance you may be operating around people who are unfamiliar with this type of operation.

In the event that a mishap occurs on a DOI mission, it must be reported in accordance with 352 DM 6.5. Additionally, reporting requirements contained within NTSB regulation 49 CFR 830.5 (immediate notification) also apply to UAS operations. But just as important, the SAFECOM system is always available for reporting any safety related issue. SAFECOM provides the ability for all of us to learn the important lessons from other operator's experience and helps prevent mishaps from reoccurring in the future.

Remember the 5 Ps: Preflight Planning Prevents Poor Performance !

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