

Call when Needed UAS Lessons Learned Update – 8/11/19

Background: Vendor provided UAS services performed this season have yielded the following lessons learned and updated operational workflows. CWN UAS have tactical (situational awareness) and logistical (mapping) capabilities.

Chain of Command Lessons learned:

1. A singular point of contact is essential for efficient UAS operations.
2. The AOBD may not have the expertise to direct a particular UAS mission and should assign a point of contact for each UAS mission. This is particularly important for data collection/mapping missions.
3. A list of product options and examples should be proved to the IMT before/during the initial briefing.

Chain of Command Considerations

- The most effective method to maintain a positive and productive span of control is to place the UAS Manager (UASM) and all UAS operations under the Air Operations Branch Director (AOBD) or designee.
- Requests for the UAS, either tactical or logistical, are directed to the AOBD and prioritized as required.
- **A point of contact for each UAS mission should be assigned by the AOBD and communicated to the UASM.**
- The assigned point of contact will brief the UASM on the following parameters
 - Mission objective or data product requirement (deliverable)
 - Timeframe of the mission or when the data product is needed
 - Format of the data product
 - Delivery location of the data product

Tactical Use (Dual EO and IR Gimbal) Lessons Learned

1. The video feed from the gimbal provides real time situational awareness.
2. The coordinate (lat/lon) information transmitted by the gimbal has slant range/slant angle error and may not be accurate)

Tactical Use (Dual EO and IR Gimbal) Considerations

- Use the gimbal video feed to provide real time situational awareness in either infrared (IR) or RGB/Daylight (EO) spectrums.
- The video feed can be viewed at the ground control station, ICP, or on remote tablets.
- The video feed can be used to visually identify heat sources which can be plotted on geopdf maps or added to the Collector feature service.
- Video can be transmitted about 5-10 miles from the ground station but is affected by terrain and other obstructions.

- The most reliable way to view the feed is to place an operations person at the UAS ground station

Logistical Use Lessons Learned (mapping)

1. A fixed mount camera can be used to collect still images at specified time intervals. These images can be used by UAS Data Specialists (UASD) to render imagery of the fire area which can then be used to digitize (trace) fire perimeters.
2. Aerial imagery (orthomosaics) may also be used to analyze fire severity/fire effects
3. **An incident subject matter expert should be assigned to the UASM to ensure quality of the requested product.**

Logistical Use Considerations

- It takes 4-6 hours to process still images into orthomosaics
- Mapping missions should be conducted separately from other missions to avoid over collecting data.