



# Interagency Aviation Information Bulletin



IA IB 19-01

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**Subject: 2019 Wildland Fire Unmanned Aircraft Systems Briefing for Aviation Personnel**

**Background: Agency and contractor provided Unmanned Aircraft Systems (UAS) are utilized on wildland fires to provide mapping, situational awareness, and aerial ignition services.**

**Distribution: All Fire Aviation Activities**

**Discussion:**

**Policy**

The *NWCG Standards for Fire Unmanned Aircraft Operations* (PMS 515) contains operational procedures for fire UAS missions. Federal personnel participating in fire UAS operations must attend NWCG training (*UAS Incident Operations, S-373*) and complete a position task book prior to participating on federally managed incidents in a qualified UAS position. All UAS/Remote Pilots are required to possess current OAS authorization cards.

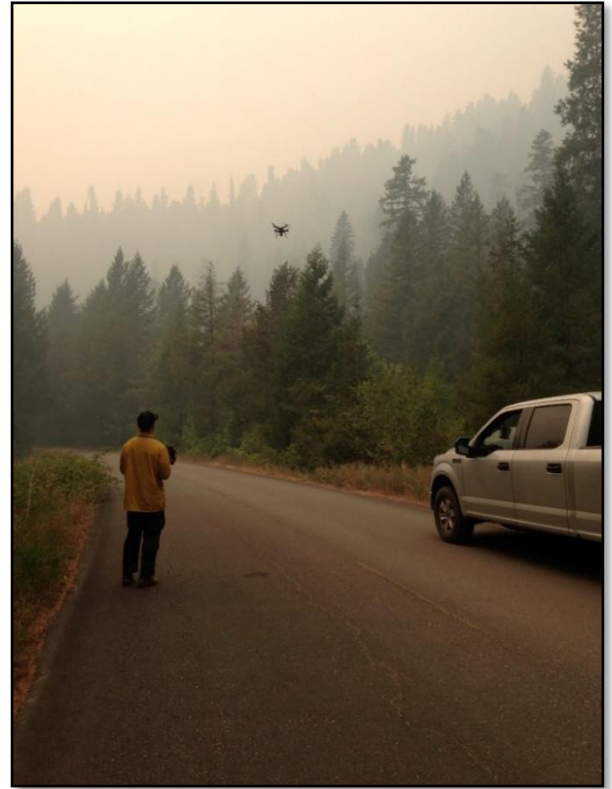
**Key Points**

- UAS personnel follow the Fire Traffic Area (FTA) protocol.
- All UAS are capable of maintaining an assigned altitude based on an altimeter setting.
- UAS do not have automated flight following (AFF).
- UAS operations originate within the FTA. Initial contact will be made with aerial supervision or on-scene aircraft prior to launch.
- UAS personnel coordinate with dispatch/helibase prior to all fire missions.
- UAS radios (FM and AM) are ground based. Communication may be difficult in certain terrain.

There are two types of fire UAS operations; **Fireline and Launch and Recovery Zone.**

**Fireline Operations** (typically small, <5lbs. multirotor)

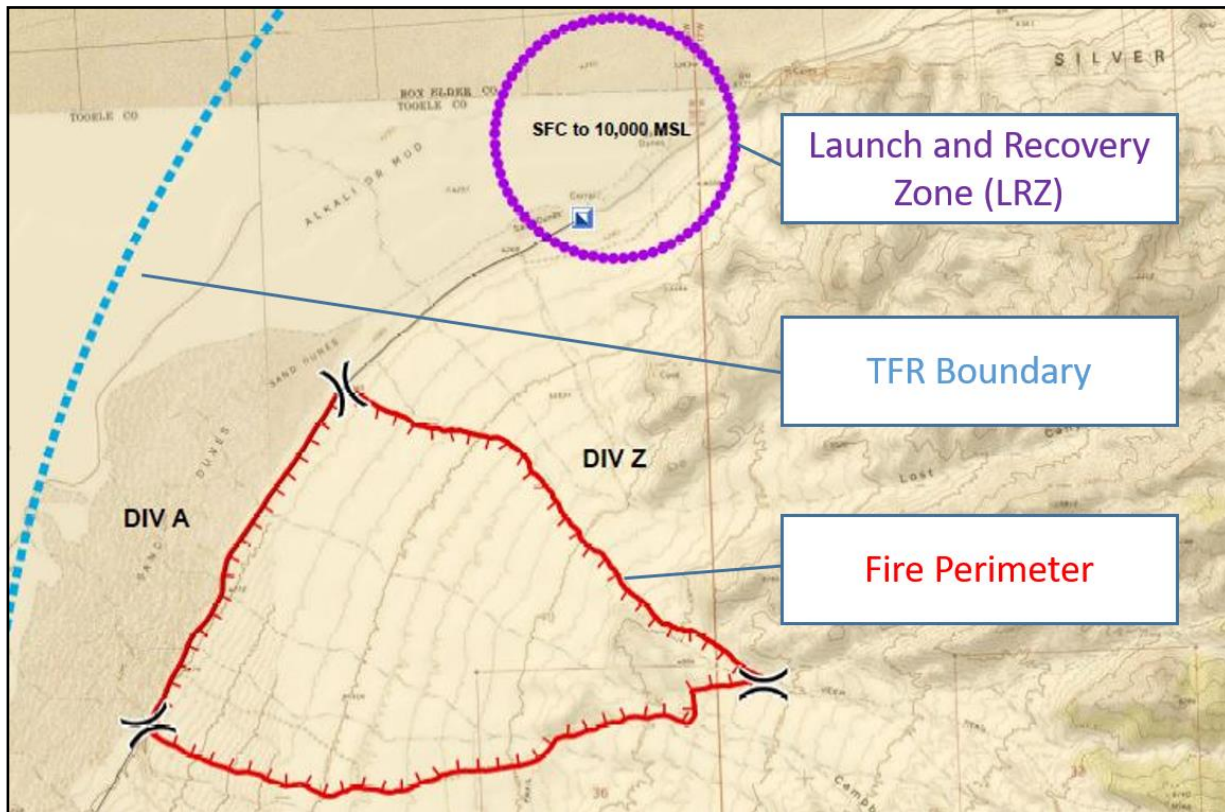
- Missions are flown on the fireline within line of sight of the remote pilot and up to 400' above ground level (agl).
- Typically conducted by agency firefighters such as smokejumpers, hotshots, or single resource UAS Pilots (UASP).
- UAS are launched from multiple locations on the fireline based on situational awareness or mapping requirements.
- Remote pilots will pre-brief with air and ground personnel and coordinate with on-scene aircraft.
- Systems are small (multirotor) carrying a video/mapping/aerial ignition payload.
- Communications are conducted on FM frequencies. **Fireline personnel will not have AM radios and will not be monitoring the air to air (Victor) frequency.** Handheld AM radios are not reliable on the fireline.
- Fireline UAS are not equipped with transponders.



*Fireline Operations with 3DR Solo Quadcopter*

**Launch and Recovery Zone Operations** (typically large, >40 lbs. fixed wing)

- Missions are flown from a fixed location away from the fireline, but within the TFR.
- UAS flights are beyond visual line of sight (BVLOS) and at least 3,500' agl.
- Missions are typically conducted by contractors in conjunction with a federal UAS Manager (UASM) and UAS Data Specialist (UASD).
- UAS is launched from a Launch and Recovery Zone (LRZ) within the TFR. **The LRZ is a pre-defined cylinder extending from the surface to the TFR ceiling and is designed to protect UAS during the takeoff and landing phases of flight.**
- The LRZ will be depicted on incident aviation maps when utilized.
- The UASM will pre-brief with air/ground personnel and coordinate with on-scene aircraft.
- The UASM will request clearance (prior to launch) from aerial supervision if on-scene.
- The UASM will notify aerial supervision/on scene aircraft and helibase when the LRZ is hot (active) and cold (inactive).
- Communications are conducted on AM and FM radios. The UASM utilizes/monitors the assigned air to air (Fixed Wing/TFR Victor) frequency and assigned FM frequencies.
- Contract UAS are equipped with transponders and will be transmitting on 1255.



Example: UAS Launch and Recovery Zone (LRZ)

**Additional Information:** [Interagency Fire UAS Website:](https://sites.google.com/a/firenet.gov/interagency-fire-uas/)

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