

# Wildland Fire Unmanned Aircraft Systems Information and Mission Procedures

## Background

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

## Policy

The *NWCG Standards for Fire Unmanned Aircraft Operations* (PMS 515) contains operational procedures for fire UAS missions. 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.

## 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; Agency/fireline and contract/launch and recovery zone.

## Agency/Fireline Operations

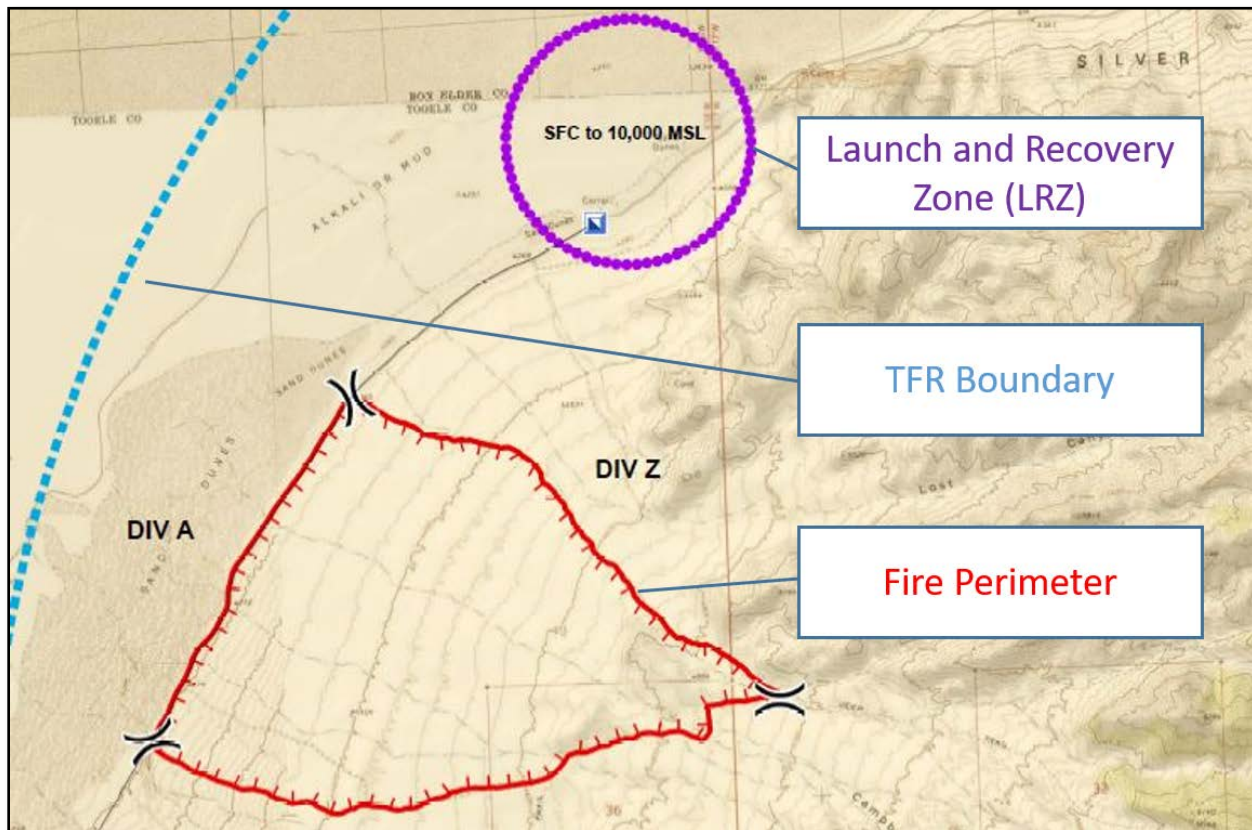
- Flights are conducted within line of sight and up to 400' above ground level (agl).
- Typically conducted by agency firefighters such as smokejumpers, hotshots, or single resource UAS Pilots (UASP).
- UAS are launched from multiple locations on the fireline based on situational awareness or mapping requirements.
- Remote pilots will pre-brief with air and ground personnel and coordinate with on-scene aircraft.
- Systems are small (<5 lb.) quadcopters carrying a video/mapping 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.**
- Fireline UAS are not equipped with transponders.



*Fireline Operations with 3DR Solo Quadcopter*

## Contractor/Launch and Recovery Zone Operations

- Flights are conducted beyond visual line of sight (BVLOS) and at least 3,500' agl.
- 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.
- The UASM will pre-brief with air/ground personnel and coordinate with on-scene aircraft.
- The UASM will request clearance 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 utilize/monitor the assigned air to air (Fixed Wing/TFR Victor) frequency and assigned FM frequencies.
- Contract UAS are equipped with transponders.



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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