

Federal UAS Positions and Training

Operational Policy and Training: These four positions shall operate within the provisions of the:

- 1) *Interagency Fire Unmanned Aircraft Systems Guide* (PMS-515)
- 2) *National Wildland Fire Qualification System* guide (PMS 310-1)
- 3) *Field Managers Course Guide* (PMS-901-1)
- 4) Applicable agency and FAA policies.

UAS Remote Pilot (UASP) – This position supports incident operations by providing real-time situational awareness in the form of electro-optical (daylight) or infrared video/still images. This position is also trained to collect imagery and telemetry which can be processed into precise planning documents such as geo-referenced maps, orthophotos, digital elevation models, or 3D terrain models.

Agency Remote Pilot certification and currency is required for this position.

UAS UASD (UASD) – This position collects, stores, and disseminates UAS collected data. This position specializes in converting video, still, or telemetry data into either a pre-processed dataset or precision product such as geo-referenced maps, orthophotos, digital elevation models, or 3D terrain models. The UAS UASD works as a team with the Remote Pilot or UASM (contract operations) to generate data required for strategic level planning, assessment, or decision making tools. This position may also work with the Geographic Information System Specialist (GISS) to generate required products.

UASL (UASL) – This position leads a group of Remote Pilots/UASDs on an incident and provides a single point of contact for UAS operations/data processing to incident leadership. A typical UAS module consists of at least one Remote Pilot and one UASD.

Agency Remote Pilot certification and currency is required for this position.

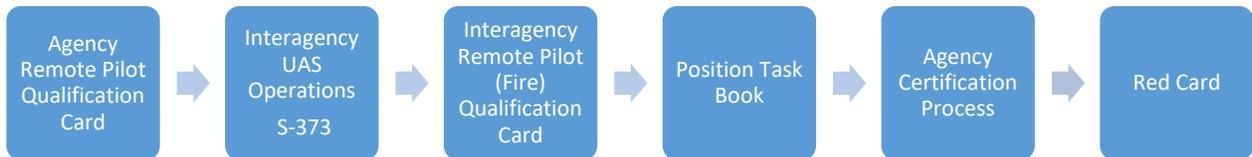
UASM (UASM) – This position is the conduit between a UAS vendor (under federal contract/agreement) and an Incident Management Team (IMT). The UASM coordinates vendor UAS missions with operations, air operations, and planning personnel and is the designated government official (ACOR/PI) for the UAS contract/agreement.

Training/Certification Process: Prior to attending interagency UAS training, remote pilots must meet agency specific requirements. The following workflows depict the typical process.

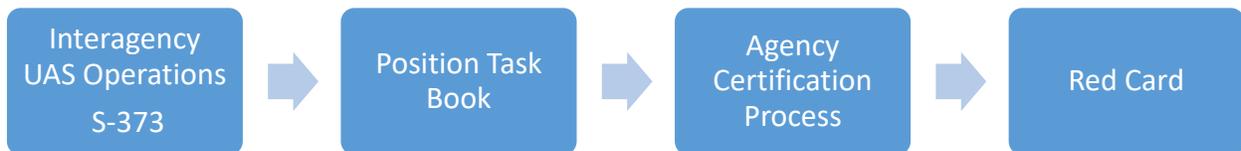
Agency Remote Pilot Certification Process



UAS Pilot (UASP), UASM (UASM), and UASL (UASL) Qualification Process



UAS UASD (UASD) Qualification Process (UAS Pilot training is not required)



Interagency UAS Utilization: The key to effective utilization of UAS resources is determining the **final data product**. Examples include:

- 1) Situational awareness
- 2) Perimeter and acreage calculation
- 3) Aerial photographs or video
- 4) Incident perimeter map (point, line, polygon data)
- 5) Infrared perimeter map (raster data)
- 6) Digital orthophotos (fire area, point of origin, structure triage, damage assessment)
- 7) Digital Elevation Model (DEM)
- 8) 3D models (terrain/infrastructure)

UAS Personnel Utilization: The UASP is trained to capture data and provide basic imagery to incident personnel. If the desired product is situational awareness, small scale acre/perimeter calculation, or aerial photos/video, a UASD is not required.

The UASD is trained to convert data such as telemetry, data log files, photos, or videos into a format that can be imported into specialized software which is used to create precision planning or analysis products. The UASD works with the GISS (if assigned) to develop incident maps, orthophotos, DEMs, or 3D terrain models.

The UASL is a leadership position. The Module Leader is a conduit between incident management and a team of UASPs and UASDs. This position maintains an appropriate span of control for the team and is the primary point of contact for the UAS Module.

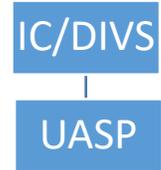
The UASM provides oversight and coordination for contract UAS operations. This position is utilized to coordinate contract UAS operations with the air operations branch, planning

section, participating aircraft, aerial supervision, and ground personnel. This position is activated when contract UAS services are requested for an incident.

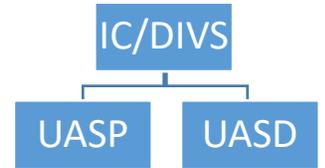
Incident Command System (ICS): UAS positions are designed to expand and contract within ICS. The complexity of the data product and UAS operation(s) drive the personnel requirement.

Example UAS Position Utilization and Hierarchy (ICS Structure):

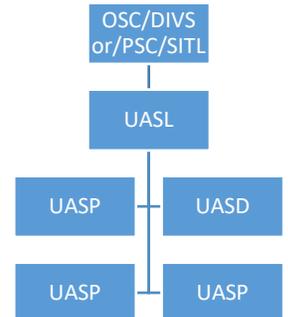
Low complexity data product requirement such as fireline SA, small scale acre/perimeter calculation, photos/video. The UASP is trained to independently provide these products.



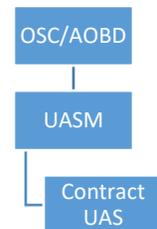
Moderate complexity data product requirements supporting small incidents (type 3, 4, or 5): In this scenario, the UASD would either produce the desired product or hand off pre-processed sensor/telemetry data to an assigned (or local) specialist.



High complexity data products supporting large incidents:
Large/complex incident may require a mix of UAS products or services and multiple UAS personnel. In this case a leadership position is activated to provide direction to a team of UAS personnel.
Organizational structure will vary depending on the section/unit which requires UAS data collection.



The UASM position is activated when a contract UAS resource is mobilized. This will typically occur on large incidents. The UASM works directly for the AOBD or designee.



Ordering UAS Personnel: UAS personnel are ordered through established dispatch processes (ROSS). UAS modules may be assembled by ordering single resources and assembling the team on an incident or ordered as a UAS Module (UASL, UASP, UASD), if available.