

# UNMANNED AERIAL SYSTEM (UAS) **RESPONSE PLAN** **TEMPLATE**

## **Background**

The potential safety hazards and security threats presented by errant or malicious UAS activity in the National Airspace System (NAS) and the evolving tactics used by hostile actors are provoking a growing number of efforts by public and private sector entities to address these risks. The potential for UAS activity to interfere with or halt operations at an airport is a known threat, demonstrated by recent disruptions to operations at Gatwick Airport in the United Kingdom (December 2018) and Newark Liberty International Airport (January 2019). TSA is working with federal agency partners, local airport operators, law enforcement officials, and industry to prepare, prevent, and respond to UAS threats to aviation security and airport operations. Additionally, airports are encouraged to develop local response plans to ensure a proper response to address unauthorized UAS operating on or near the airport.

## **Scope**

Standard operating procedures for responding to unauthorized UAS activity at or near the airport. Considers protocol according to threat level presented by observed UAS:

### **Low**

Report of UAS operating near the airport with no disruption to operations. Low impact UAS events could be categorized as those where UAS have been observed and reported but are no longer active; pose a nominal hazard to the airport; present no indication of intentional harm; and are unlikely to cause disruption to airport operations.

### **Examples:**

- Confirmed but not longer active UAS. A drone was identified near airport property, usually through visual observation, but the drone is no longer active.
- Confirmed and active UAS. A drone has been identified near airport property, is still active, but poses no threats or potential safety issues to airport operations.
- Report of UAS operating without authorization on airport adjacent property (up to five miles), but not exhibiting threatening behavior.

**Response Type:** *Monitoring, reporting, and documenting.*

## Medium

Report of unauthorized UAS operating on or near airport, with the potential to cause disruption to operations, for example by operating in an area that presents a significant safety concern, such as in the path of aircraft taking off or landing. Medium impact UAS events could be categorized as those that occur in visible proximity of the airport that pose a moderate safety risk to airport operations, present no indication of intentional harm, but has potential to disrupt operations due to proximity to airport property, type of UAS operation, or direction of the UAS flight path.

### *Examples:*

- Observation of a UAS in an area of potential safety concern, at the perimeter fence, or is persistent beyond the 20-30 minute battery life of the average UAS.
- Observation of one or multiple UAS above the airport perimeter or in the immediate vicinity.
- Off airport property, especially when UAS is conflicting with arriving or departing aircraft.
- Multiple UAS operating on or near the airport and are exhibiting persistent hovering behaviors.

**Response Type:** *Reporting, documenting, and actively dispatch resources to track the UAS and locate the operator. Determine need to escalate threat level.*

## High

Persistent unauthorized UAS operating on or near airport, with the intention to cause disruption to operations or intentional harm. High impact UAS events could be categorized as those that occur within the airport's airside environment, pose a substantial safety risk to airport operations, and present indication of intentional harm or intentional disruptions to airport operations.

### *Examples:*

- Explicitly threatening behavior, such as hovering above a runway for a prolonged period.
- Knowledge of a weaponized drone on or in the immediate vicinity of airport property.
- A swarm of drones is observed operating on or near the airport.
- Attack by a drone on the airport or adjacent community.

**Response Type:** *Reporting, documenting, and actively dispatch resources to track the UAS and locate the operator. Depending on the severity of event, request federal response. Recovery activities may follow.*

## Definitions and Acronyms

- Unmanned Aircraft (UA): Any aircraft operating or designed to operate autonomously or to be piloted remotely without a pilot on board.
- Unmanned Aircraft Systems (UAS): An unmanned aircraft and the equipment required to control it remotely.
- Counter Unmanned Aircraft Systems (C-UAS): A system or device capable of lawfully and safely disabling, disrupting, or seizing control of an unmanned aircraft or unmanned aircraft system.
- UAS Sightings: First hand report of a drone that is within visual line of sight
- UAS Reports: First-hand observations of UAS that are reported to airport operations, or a notification that comes to airport operations through Air Traffic Control (e.g., a report that came to ATC from a pilot, etc.)
- Disruption: The negative impact of a UAS Of Interest (UOI) on an airport, resulting in the degradation of air traffic operations or other security, safety or efficiency impacts on the NAS. The negative impact may include any consequence of a response action.

- Mitigation: The action of reducing the severity of a UAS threat through enforcement or technology.
- UAS Detection, Identification, and Interdiction Technology (DTI): UAS detection involves the observation of UAS operations through technical means such as electro-optical/infra-red (EOIR), acoustic, radar, RF receivers, and/or networked surveillance using shared positional and identification data; identification involves the authentication of UAS operation based on the totality of the circumstances, including a highly reliable primary observation or some form of two-factor confirmation such as a UAS detection system backed by a first-hand visual sighting; interdiction involves radio-link jamming, GPS jamming, taking control of the drone (spoofing), lasers, electromagnetic pulses, and kinetic projectiles.
- Local Communities of Interest (COI): Those agencies based in, operating at, and/or responsible for an airport that participate in planning and response activities designed to address unauthorized UAS operations that impact airport operations. In addition to federal, state, and local entities, the local COI includes private sector actors, such as air carriers.
- Federal Security Director (FSD): TSA representative and person charged with overall responsibility for aviation related issues
- National Federal Response (NFR): National-level resources and command and control to halt persistent disruptive UAS operations at an airport.
- Lead Federal Agency (LFA): The agency responsible for C-UAS response at airport (TSA).
- Federal, State, and Local Entities (FSL): The federal, state, and local agencies that should be considered as part of a UAS response plan.
- Steady State Operations: Preparation for a potential UAS incident at an airport.
- Unified Command (UC): Designated individuals from TSA, Airport Operations, and Airport Police that will coordinate a response to a high-level UAS threat
- Threat: The reasonable likelihood that UAS or unmanned aircraft activity– if unabated – would:
  - Inflict or otherwise cause physical harm to a person;
  - Inflict or otherwise cause damage or harm to assets, facilities or systems;
  - Interfere with the operational mission, including movement security, or protection of a covered facility or asset;
  - Facilitate unlawful activity;
  - Conduct unauthorized surveillance or reconnaissance; or
  - Result in unauthorized access to, or disclosure of classified, sensitive or otherwise lawfully protected information.
- Credible UAS Threat: Intelligence indicates that there is a UAS threat to a specific airport, airline, or region, which has sufficient credibility to merit immediate response preparations.
- Essential Elements of Information (EEI): Key information that is documented by TSA after a UAS incident, including characteristics about the timing and activity, identity of the UAS, additional vehicle characteristics such as payload, UAS behavior, operator information, evasive actions that resulted from the incident, impact to flight operations, and media.

## **Supporting Partners and Agencies**

### ***Federal Responsibilities and Authorities***

The UAS Response Development Team (UASRDT) at the airport, led by the FSD and Federal Air Marshal Service (FAMS) Supervisory Air Marshal in Charge (SAC), involves the Assistant Federal Security Directors for Law Enforcement (AFSD-LE), Compliance, Transportation Security Specialist-Explosives (TSS-E), and FSL law enforcement support. The UASRDT conducts at minimum yearly updates of the local UAS Plan. Federal supporting entities include:

### ***Transportation Security Administration (TSA)***

Mission Responsibilities: Responsible for the security of civil aviation. The Lead Federal Agency (LFA) for C-UAS response at an airport.

### **Federal Aviation Administration (FAA)**

Mission Responsibilities: Responsible for control and routing of air traffic and determining whether a UAS is operating lawfully (for example, operating with a waiver), or unlawfully. Air Traffic Controllers are not required to provide ATC services, including separation, to unmanned aircraft; however, ATC generally provides advisory information from any pilot-reported or tower-observed activity, providing information on the UAS activity, position, distance, course, type of UAS, and altitude.

### **Federal Bureau of Investigation (FBI)**

Mission Responsibilities: Responsible for the investigation of terrorist acts or violent crimes against aircraft.

### **Local Authority**

While state and local entities do not have authority to use counter-UAS technology to mitigate UAS, law enforcement responsibilities may include:

- (1) detecting UAS;
- (2) reporting incidents to Federal entities (for example, the FAA Regional Operations Center);
- (3) observing the UAS in flight;
- (4) identifying the type of device (e.g., fixed wing or multi-rotor) and the UAS size, shape, color, and payload;
- (5) locating the operator; and
- (6) executing appropriate police action to include, among others, obtaining evidence, identifying witnesses, and conducting initial interviews.

In the case that the local law enforcement response is insufficient to stop the UAS operations at the airport, the Federal government may provide assistance through a National Federal Response (NFR) to mitigate the UAS, which may include the use of C-UAS technology. The execution of an NFR will normally not be considered for disruptions where the local community of interest (COI) has not exhausted its own resources to successfully resolve the UOI. Given the shared responsibilities and authorities of airports and FSL agencies in protecting airports, and the areas adjacent to airports, coordination between Federal and SLTT partners to address a specific UAS threat will ensure a unified and complete response.

**[Insert: Relevant State Agencies]**

**[Insert: Relevant Local Law Enforcement Agencies]**

## **Steady State Operations, Vulnerability Assessments, and Incident Preparation**

Airport Operations maintains ongoing coordination with law enforcement and TSA to prepare for a response to a potential UAS incident. This includes understanding the C-UAS legal environment, technical capabilities of commercial UAS systems, and UAS operator behavior patterns; ensuring UAS awareness in airport community engagement and community outreach efforts; understanding response requirements and reporting Essential Elements of Information (refer to TSA UAS Tactical Response Plan) should an UAS incident occur; evaluate vulnerabilities, including potential UAS launch sites, around the airport.

### **Operational Responsibilities (by level of impact)**

#### **Low**

**Report of unauthorized UAS near airport with no disruption to operations. Low impact UAS events could be categorized as those where UAS are no longer active or pose a nominal hazard to the airport, present no indication of intentional harm, and unlikely to cause disruption to airport operations.**

**Airport Operations:** When a UAS report comes in directly to Airport Operations, airport operations personnel will report relevant information to other relevant stakeholders such as airport police, ATC, and TSA. Documentation and reporting should include information pertaining to the UAS such as:

- Location, altitude, and direction of travel
- Description of UAS (color, size, lights, payload)
- Nature of UAS activity and/or interference with flight operations

In the event that there is pilot-reported or tower-observed UAS activity, ATC may alert airport operations with similar information.

**Airport Operations** and **Airport Police** may determine whether to push the report out to airport field staff for situational awareness and in an attempt to identify/track/monitor a UAS that may be within line of site of airport property.

## Medium

**Observation of unauthorized UAS operating on or near airport, with the potential to cause disruption to operations, for example by operating in an area of potential safety concern, such as a takeoff or landing path. Medium impact UAS events could be categorized as those that occur in visible proximity of the airport that pose a moderate safety risk to airport operations, present no indication of intentional harm, but has potential to disrupt operations due to proximity of activity.**

**Airport Operations:** Airport Operations will execute protocol consistent with a low-level UAS threat. If UAS activity appears to be creating a potential safety hazard or there is persistent behavior characterizing the definition of a medium-level threat, Airport Operations will coordinate with ATC regarding possible deviations to flight operations. Additionally, Airport Operations may activate additional notification systems and alert public relations.

**Airport Police:** When an officer responds to a UAS incident within the APD jurisdictional boundary, possible responses may include:

1. Making a radio broadcast of the UAS sighting and include the following information:
  - Location, altitude, and direction of travel
  - Description of UAS (color, size, lights, payload)
  - Nature of UAS activity and/or interference with flight operations
  - Request additional unit(s) to conduct a search of the area for the UAS operator
  - Request Airport Operations to respond to the officer's location
2. Provide the FAA ATC Tower with the location, altitude and direction of travel of the UAS, and ask if the UAS has approval to fly in the area observed.
3. Continue to observe the UAS, provide status updates as necessary, and coordinate the search for the operator with responding unit(s).
  - Average UAS flight times are approximately 20-30 minutes, at which point the UAS will likely return to the operator or designated landing area for retrieval by the operator. It is important that officers track the UAS during the return flight and direct unit(s) to the landing area to identify the operator. The operator can be up to three miles away.
  - If it appears that the UAS operator is located outside the APD jurisdictional boundary, the officer shall contact the law enforcement agency that has jurisdiction over the location and request enforcement of applicable local municipal codes.
  - Enforcement options may include arrest, citation, confiscation of the UAS, and/or notification to FAA/DHS representatives for enforcement of applicable federal regulations.
  - Consideration for arrest and confiscation of the UAS should be given whenever it is determined that the UAS had interfered with manned aircraft flight operations.
4. If both the UAS and operator cannot be tracked or located, document the incident and note any interference with manned flight operations.

## High

**Persistent unauthorized UAS operating on or near airport, with the intention to cause disruption to operations or intentional harm. High impact UAS events could be categorized as those that occur within the airport's airside environment, pose a substantial safety risk to airport operations, and present indication of intentional harm.**

**Airport Operations:** In a high-threat scenario, Airport Operations will work with Airport Police to exhaust all local resources. In the event that UAS activity has been escalated from medium to high-level threat, and all local resources have been exhausted in trying to identify and detain the UAS operator, Airport Operations will:

- Establish a Unified Command that involves TSA, FBI, Airport Police, and Airport Operations, and make determination for location of command post (relative to the UAS under observation) and communicate it to all agencies.
- Engage in regular conversation and coordination with ATC about any possibility for the need to alter flight paths
- Consider runway closures if the threat is so significant that it requires flight path alterations, for example if there is a UAS, or multiple UAS operating near the east perimeter of the airport at an altitude that conflicts with arriving aircraft, or a UAS operating on airport property with persistent threat to operations.
- If the event is determined to be a clear attack by a UAS on the airport, Airport Operations should work with Airport Police to drive traffic from affected areas and restrict access to authorized personnel.
- Airport Operations should liaise with Airport Police to document all essential information resulting from an incident.

**Airport Police:** Airport Police will follow the same protocol and response procedures for a medium-level threat. Law enforcement presence under a high-threat scenario may include increased patrols or surveillance at the potential launch locations, at major roads/highways, and requesting periodic aerial surveillance of potential UAS launch sites. Once all local resources have been exhausted, APD will defer to the federal entities as to next steps.

**FSD:** If the UOI causes a persistent disruption to an airport, and a local response is insufficient to mitigate the UOI, the incident may require a National Federal Response (NFR), governed by the draft CONOPS, Unified National Level Response to Persistent UAS Disruption of Operations at Core 30 Airports. Reference an airport specific TSA UAS tactical response plan for additional protocol.

### Recovery

If a UAS incident results in halted air traffic operations, TSA will coordinate with the FAA, airport operations, airport police, and other interested entities to determine when to resume operations at the airport; this will be a joint decision between the Unified Command. To resume operations, Unified Command will require a high level of confidence that there are no other drones operating in the area. Airport Operations should work with ATC to resume operations.

TSA will use the Essential Elements of Information (EEI) checklist to track completion of immediate and follow-up actions and assist in collecting information. In coordination with all involved parties, the FSD will conduct an after action report to assess the response and actions taken.

### Reference Documents

1. TSA Counter UAS Tactical Response Plan

### Detection Equipment Procedures

***[Insert distinguishing procedures, should detection equipment be introduced into the airport environment]***