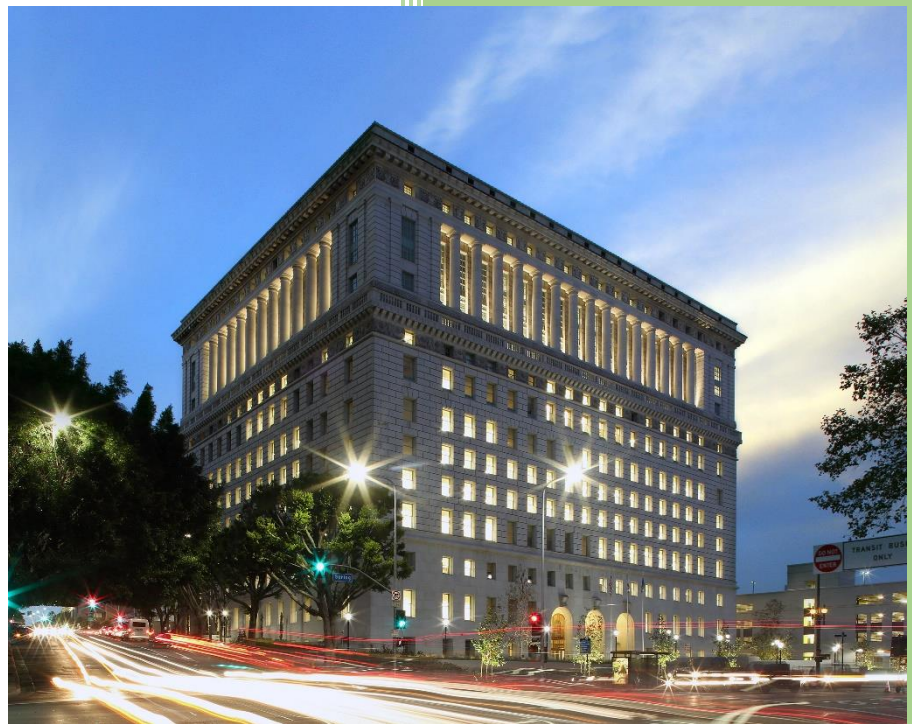


# Los Angeles County Sheriff's Department

Audit and Accountability Bureau



## UNMANNED AIRCRAFT SYSTEMS AUDIT

COUNTYWIDE OPERATIONS –  
SPECIAL OPERATIONS DIVISION

Project No. 2022-7-A

September 22, 2022



Alex Villanueva, Sheriff

**LOS ANGELES COUNTY SHERIFF'S DEPARTMENT  
Audit and Accountability Bureau**

**UNMANNED AIRCRAFT SYSTEMS AUDIT – COUNTYWIDE OPERATIONS  
SPECIALIZED OPERATIONS DIVISION  
SPECIAL ENFORCEMENT BUREAU  
Project No. 2022-7-A  
AUDIT REPORT**

**PURPOSE**

The Audit and Accountability Bureau (AAB) conducted the Unmanned Aircraft Systems (UAS) Audit – Countywide Operations – Specialized Operations Division – Special Enforcement Bureau (SEB) under the authority of the Sheriff of Los Angeles County. The audit was performed to determine how the Los Angeles County Sheriff's Department (Department) and the SEB complied with the Manual of Policy and Procedures (MPP), SEB Unit Orders, 14 Code of Federal Regulations (CFR) and the Department's Certificate of Authorization (COA) filed with the Federal Aviation Administration (FAA).

The AAB conducted this audit under the guidance of the Generally Accepted Government Auditing Standards.<sup>1</sup> The AAB determined the evidence obtained was sufficient and appropriate to provide reasonable assurance for the results based on the audit objectives.

**BACKGROUND**

On January 24, 2017, the Los Angeles County Board of Supervisors (BOS), requested for the Civilian Oversight Commission (COC) to evaluate the Department's policies and procedures regarding the use of the UAS. On September 28, 2017, and in consideration of the Office of Inspector General report, the COC presented ten recommendations to the BOS, which the Department subsequently agreed to implement. To date, evolving FAA changes have prompted the need for Department policy and procedural changes which, in some cases, are more stringent than FAA requirements. As such the SEB continues to revise policies as FAA updates and UAS technological advances occur.

In addition, as a result of recommendation number seven which states that the UAS program should be audited on "at least an annual basis". The AAB will consider results and risk factors to determine the frequency in which the UAS audit will be conducted.

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<sup>1</sup> United States Government Accountability Office, Government Auditing Standards, July 2018.

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**METHODOLOGY**

**Scope**

The Department's SEB is the only bureau authorized to deploy a UAS. The audit consisted of two main objectives regarding the deployment of the Department's UAS. The applicable sections from the MPP, SEB Unit Orders, and the Department's COA filed with the FAA were used as criteria for the audit.

- **Objective No. 1 – Authorized UAS Deployment:** To determine if each UAS deployment was properly authorized and if the deployment met the applicable mission-type criteria.
- **Objective No. 2 – UAS Operating Requirements:** To determine if each UAS deployment was operated appropriately.

**Audit Time Period**

The audit time period was from June 1, 2021, through April 30, 2022.

**Audit Population**

The audit population consisted of all 12 UAS deployments during the audit time period.

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**AUDIT DETAILS AND RESULTS**

**Objective No. 1 – Authorized UAS Deployment**

**Objective No. 1(a) – Determine if Each UAS Deployment was Appropriately Authorized**

**Criteria**

Manual of Policy and Procedures Section 5-09/570.10, Unmanned Aircraft System Procedures, (July 2018), states:

*All requests for the use of the unmanned aircraft system (UAS) shall be evaluated and authorized or denied by the Special Enforcement Bureau (SEB) team commander.*

**Procedures**

Auditors reviewed each UAS deployment's mission documentation to determine if it was appropriately authorized by a SEB team commander.

**Results**

All 12 (100%) UAS deployments met the criteria for this objective.

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**Objective No. 1(b) – Determine if the Deployment was for an Approved Mission Type**

Criteria

Manual of Policy and Procedures Section 5-09/570.00, Unmanned Aircraft System, (July 2018), states:

*Authorized UAS operations are limited to emergency and life-threatening situations, such as search and rescue missions, explosive ordnance detection missions, disaster response, barricaded suspects, hostage situations, active shooters, hazardous materials incidents, fire-related incidents, and other high-risk tactical operations. A UAS **shall not** be used for non-emergent surveillance missions or missions that would violate the privacy rights of the public.*

Procedures

Auditors reviewed each UAS deployment’s mission documentation to determine if the mission was for an approved mission type.

Results

All 12 (100%) UAS deployments met the criteria for this objective. The table below represents a breakdown of the mission types.

**Table No. 1 – Mission Types**

<b>Mission Type</b>	<b>Frequency</b>
Barricaded Suspect	7
Other High-Risk Tactical Operation	2
Explosive Ordnance Detection	1
Hostage Situation	1
Search and Rescue	1
<b>Total</b>	<b>12</b>

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**Objective No. 2 – UAS Operating Requirements**

**Objective No. 2(a) – Determine if SEB maintained a Cadre of Certified UAS Pilots**

Criteria

Manual of Policy and Procedures Section 5-09/570.00, Unmanned Aircraft System, (July 2018), states:

*SEB shall maintain a cadre of individuals certified by the FAA to operate an UAS. Only those individuals authorized by the SEB unit commander to operate an UAS shall operate an UAS.*

Procedures

Auditors reviewed the SEB UAS pilot list and FAA certification documents to determine adherence to this criterion. There are currently 22 SEB UAS pilots.

Results

Twenty-one of the 22 (95%) SEB UAS pilots met the criteria for this objective. The UAS license for one pilot lapsed by 15 months. Auditor's evaluated documentation that indicated this pilot flew two UAS deployments during the review period. To date, the pilot's license is now current.

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**Objective No. 2(b) – Determine if Each UAS Deployment was Conducted by a Two-Person Team**

Criteria

Manual of Policy and Procedures Section 5-09/570.00, Unmanned Aircraft System, (July 2018), states:

*... An UAS operation requires a two-person team of SEB personnel consisting of a qualified operator and an observer.*

Procedures

Auditors reviewed each UAS deployment's mission documentation to determine if a two-person team conducted the operation.

Results

All 12 (100%) UAS deployments met the criteria for this objective.

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**Objective No. 2(c) – Determine if Each UAS Deployment was Preceded by a Notice to Airmen Filing**

Criteria

Manual of Policy and Procedures Section 5-09/570.10, Unmanned Aircraft System Procedures, (July 2018), states:

*UAS operators are responsible for making a Public Notice to Airmen (NOTAM) and all required FAA notifications prior to operating an UAS.*

Federal Aviation Administration Certificate of Authorization No. 2020-WSA-5727-COA, §C. Notice to Airmen, (July 2020), states:

*A Distant (D) NOTAM must be issued prior to conducting UAS operations...*

*...For first responders only. Due to the immediacy of some emergency management operations, the (D) NOTAM notification requirement may be issued as soon as practical before flight and if the issuance of a (D) NOTAM may endanger the safety of persons on the ground, it may be excluded. If the (D) NOTAM is not issued, the proponent must be prepared to provide justification to the FAA upon request.*

Procedures

Auditors reviewed each UAS deployment's mission documentation to determine if SEB personnel filed a NOTAM with the FAA prior to operating the UAS.<sup>2</sup>

Results

All 12 (100%) UAS deployments met the criteria for this objective.

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<sup>2</sup> According to the FAA, a NOTAM is a notice containing information essential to personnel concerned with flight operations but not known far enough in advance to be publicized by other means.



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**Objective No. 2(d) – Determine if a SEB Team Commander Notified and Coordinated with the Aero Bureau Watch Commander**

Criteria

Manual of Policy and Procedures Section 5-09/570.10 – Unmanned Aircraft System Procedures, (July 2018), states:

*An SEB team commander shall be responsible for notifying and coordinating with the Aero Bureau watch commander, rank of sergeant or above, prior to any UAS operations.*

Procedures

Auditors reviewed each UAS deployment’s mission documentation to determine if an SEB team commander notified and coordinated with the Aero Bureau watch commander, prior to the UAS operation.

Results

Nine of 12 (75%) UAS deployments met the criteria for this objective. For three UAS deployments, the Aero Bureau Watch Commander was notified after deployment as indicated below.

**Table No. 2 – Aero Bureau Notification**

<b>Deployment Date</b>	<b>Number of Minutes Notified Beyond Deployment of UAS</b>
July 20, 2021	8
September 15, 2021	32
December 8, 2021	180

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**Objective No. 2(e) – Determine Whether the UAS was Within the Visual Line of Sight**

Criteria

14 Code of Federal Regulations (CFR) Part §107.31 Visual Line of Sight Aircraft Operation, (June 2016), states:

*(a) With vision that is unaided by any device other than corrective lenses, the remote pilot in command, the visual observer (if one is used), and the person manipulating the flight control of the small, unmanned aircraft system must be able to see the unmanned aircraft throughout the entire flight...*

Federal Aviation Administration Certificate of Authorization No. 2020-WSA-5727-COA, §B. Operations, (July 2020), states:

*The UA must be operated within visual line of sight (VLOS) of the Pilot in Command (PIC) and the person manipulating the flight controls at all times unless otherwise specified in a Special Provision.*

Procedures

Auditors reviewed each UAS deployment's mission documentation to determine if the UAS was operated within the VLOS.

Results

All 12 (100%) UAS deployments met the criteria for this objective.

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**Objective No. 2(f) – Determine if the UAS was Operated Under the Altitude Limit**

Criteria

14 Code of Federal Regulations (CFR) Part §107.51 Visual Line of Sight Aircraft Operation, (June 2016), states:

*(b) The altitude of the small unmanned aircraft cannot be higher than 400 feet above ground level...*

Federal Aviation Administration Certificate of Authorization No. 2020-WSA-5727-COA, Operations Authorized, (July 2020), states:

*Operation of small Unmanned Aircraft System(s) weighing less than 55 pounds in Class B, C, D, E and G Airspace at or below 400 feet Above Ground Level (AGL) within the confines of Los Angeles County, CA...*

Procedures

Auditors reviewed each UAS deployment's mission documentation to determine if the UAS was operated within the FAA altitude limits.

Results

All 12 (100%) UAS deployments met the criteria for this objective.

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**TABLE NO. 3 – SUMMARY OF RESULTS**

The audit yielded the following results:

<b>Objective No.</b>	<b>Audit Objectives</b>	<b>Met the Criteria</b>
<b>1</b>	<b>AUTHORIZED UAS DEPLOYMENT</b>	
1(a)	<i>Determine if Each UAS Deployment was Appropriately Authorized.</i>	<b>100%</b>
1(b)	<i>Determine If the Deployment was for an Approved Mission Type.</i>	<b>100%</b>
<b>2</b>	<b>UAS OPERATING REQUIREMENTS</b>	
2(a)	<i>Determine if SEB maintained a Cadre of Certified UAS Pilots</i>	<b>95%</b>
2(b)	<i>Determine if Each UAS Deployment was Conducted by a Two-Person Team.</i>	<b>100%</b>
2(c)	<i>Determine if Each UAS Deployment was Preceded by a Notice to Airmen Filing.</i>	<b>100%</b>
2(d)	<i>Determine if a SEB Team Commander Notified and Coordinated with the Aero Bureau Watch Commander.</i>	<b>75%</b>
2(e)	<i>Determine Whether the UAS was Within the Visual Line of Sight.</i>	<b>100%</b>
2(f)	<i>Determine if the UAS was Operated Under the Altitude Limit.</i>	<b>100%</b>

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**OTHER RELATED MATTERS**

Other related matters are pertinent issues related to the audit but were not objectives which were measurable against Department policies and procedures.

Visual Inspection

Auditors conducted a visual inspection of the UAS. The UAS had all required lighting for night-time UAS deployment, with positional lights as well as anti-collision lighting that had a three-mile capacity. The UAS accessories included a camera that had a non-record default setting and no memory card. The UAS had no additional brackets or mounting system and no capacity to carry anything other than the camera and lighting. Per both COAs, the Department maintains the UAS in an airworthy condition and has attested to the condition in the COA application with the FAA.

Valid Pilot License during Field Training

Upon review of documentation, auditors discovered that two SEB deputies participated in the deployment of the UAS during two different field training exercises without having valid FAA UAS licenses. The SEB management has started new procedures to ensure that SEB deputies who pilot the UAS possess current FAA UAS licenses. To date both are current with FAA mandates.

Two-Person Team Operation

The Department requires a two-person team consisting of a qualified operator and an observer during UAS operations. The Department conducted two different field training exercises where pilots did not operate a two-person team during the UAS training deployments. The FAA does not require a two-person team for UAS deployments.

**CONCLUSION**

Auditors performed analyses and made assessments to identify areas in need of improvement. The AAB considers the results of this audit to be a helpful management tool for all Department personnel. The evidence presented provides reasonable assurance that Department personnel are not fully adhering to the MPP and FAA regulations.

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**RECOMMENDATIONS**

When Departmental policies and procedures and the FAA COA requirements are not adhered to, it may result in an increased risk for an inability to be compliant. Department management should disseminate the results of this audit to its personnel. Additionally, as best practice, Department management is encouraged to conduct recurring and ongoing briefings of policies and procedures. The AAB considers the results of this audit to be a helpful management tool and therefore, makes the following recommendations:

1. It is recommended that the Department ensure that personnel who are conducting UAS deployments possess a valid FAA UAS license during missions and field training exercises. (Objectives No. 2 and Other Related Matters)
2. It is recommended that the Department ensure that the Aero Bureau Watch Commander is notified prior to UAS operations, and that this communication is properly documented. (Objectives No. 2)
3. It is recommended that the Department ensure the use of a two-person team consisting of a qualified operator and an observer during UAS operations. (Other Related Matters)

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**Views of Responsible Officials**

On September 13, 2022, the Special Operations Division submitted a formal response to AAB concurring with the audit results. A copy of the audit was provided to the Office of Inspector General.

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This audit was submitted on this 22<sup>th</sup> day of September 2022 by the Audit and Accountability Bureau.

***Original Signature on File at AAB***

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LORENA BARRON  
Project Manager, Law Enforcement Auditor  
Audit and Accountability Bureau  
Los Angeles County Sheriff's Department

***Original Signature on File at AAB***

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NANCY RUANO  
Assistant Project Manager, Law Enforcement Auditor  
Audit and Accountability Bureau  
Los Angeles County Sheriff's Department

***Original Signature on File at AAB***

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M. ROWENA NELSON  
Head Compliance Officer  
Audit and Accountability Bureau  
Los Angeles County Sheriff's Department

***Original Signature on File at AAB***

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EVELYN VEGA  
Acting Captain  
Audit and Accountability Bureau  
Los Angeles County Sheriff's Department