RESOLUTION NO. 24-026

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CARSON, CALIFORNIA, ADOPTING A POLICY FOR CITY USE OF UNMANNED AIRCRAFT SYSTEMS

WHEREAS, the City Council acknowledges the potential benefits of the City of Carson ("City") employing Unmanned Aircraft Systems ("UAS"), commonly known as drones, to enhance operational efficiency, public safety, and other City uses; and

WHEREAS, the responsible utilization of UAS requires guidelines and protocols to ensure compliance with relevant regulations and safeguard privacy rights; and

WHEREAS, certain City departments have expressed interest in utilizing UAS to fulfill operational needs and enhance City services; and

WHEREAS, the successful integration of UAS necessitates adequate operational guidelines, training, certification, safety protocols, incident reporting, oversight, asset management, and data management for designated departments and personnel; and

WHEREAS, the City Council now sees fit to adopt a policy for the purpose of effectively integrating and utilizing UAS technology across City departments. This integration aims to enhance the efficiency, safety, and quality of public sector operations. By deploying drones for tasks like infrastructure inspections, public safety, environmental assessment, and emergency response, the City seeks to leverage UAS technologies to augment its capabilities in delivering services more efficiently and effectively, ensuring compliance with safety and privacy standards. The policy will apply to all City departments and contracted entities that use UAS technology, except for the Los Angeles County Sheriff's and Fire Departments and is intended to provide a flexible framework that individual departments can utilize to meet their unique operational needs. The policy extends to the use of city-owned drones and is relevant for purposes such as video production, situational awareness, emergency services, and recording urban growth and development, all within the framework of existing Federal Aviation Administration (FAA) Part 107 regulations. Additionally, this policy extends to operations contracted organizations operating within city boundaries that hold approved FAA Certificates of Authorization (COAs), waivers, or those recognized as Public Aircraft Operators (PAOs). The policy applies to the operation and use of UAS weighing less than 55 pounds and flying up to 400 feet above ground level. Flying a UAS weighing 55 pounds or more and/or flying above 400 feet above ground level requires a separate policy and approvals from the FAA.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CARSON, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. The above recitals are true and correct and are incorporated herein by this reference.

SECTION 2. ADOPTION OF UNMANNED AIRCRAFT SYSTEMS POLICY. The City Council hereby adopts the policy attached hereto as Exhibit “A” and incorporated herein by reference, entitled "Policy for city use of Unmanned Aircraft Systems."

SECTION 3. The City Council declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

SECTION 4. The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions.

SECTION 5. This Resolution shall become effective immediately upon its adoption.

[signatures on the following page]

PASSED, APPROVED, and ADOPTED this 6th day of March, 2024, at a regular meeting of the City Council of the City of Carson, California.

APPROVED AS TO FORM:

_____
Sunny K. Soltani, City Attorney

CITY OF CARSON:

_____
Lula Davis-Holmes, Mayor

ATTEST:

_____
Dr. Khaleah K. Bradshaw, City Clerk

EXHIBIT "A"
Policy for City Use of Unmanned Aircraft Systems

CITY OF CARSON
COUNCIL POLICY & PROCEDURE

NUMBER: Resolution No. 24-026		SUBJECT: POLICY FOR CITY USE OF UNMANNED AIRCRAFT SYSTEMS
ORIGINAL ISSUE: NEW	EFFECTIVE: MARCH 6, 2024	
CURRENT ISSUE:	EFFECTIVE:	ORIGINATING DEPARTMENT: INNOVATION, SUSTAINABILITY AND PERFORMANCE MANAGEMENT
SUPERCEDES:		

I. PURPOSE AND SCOPE

Purpose

The purpose of this policy is to effectively integrate and utilize Unmanned Aircraft Systems (UAS) technology across city departments. This integration aims to enhance the efficiency, safety, and quality of public sector operations. By deploying drones for tasks like infrastructure inspections, public safety, environmental assessment, and emergency response, the city seeks to leverage UAS technologies to augment its capabilities in delivering services more efficiently and effectively, ensuring compliance with safety and privacy standards.

Scope

This policy applies to all city departments and contracted entities that use UAS technology. It is intended to provide a flexible framework that individual departments can utilize to meet their unique operational needs.

The policy extends to the use of city-owned drones and is relevant for purposes such as video production, situational awareness, emergency services, and recording urban growth and development, all within the framework of existing Federal Aviation Administration (FAA) Part 107 regulations. Additionally, this policy extends to operations contracted organizations operating within city boundaries that hold approved FAA Certificates of Authorization (COAs), waivers, or those recognized as Public Aircraft Operators (PAOs). The policy applies to the operation and use of UAS weighing less than 55 pounds and flying up to 400 feet above ground level. Flying a UAS weighing 55 pounds or more and/or flying above 400 feet above ground level requires a separate policy and approvals from the FAA.

Annual Policy Evaluation and Adaptation

To ensure the UAS policy remains effective and up-to-date, an annual review process will be established. This review will assess the policy's efficacy considering increasing usage, new aircraft, other technological advancements, and changes in the federal regulatory environment. It will involve gathering feedback from stakeholders, evaluating the performance and challenges of UAS operations, and making necessary adjustments to the policy. This regular review process is crucial for maintaining a dynamic and responsive UAS framework that effectively meets the city's evolving needs.

II. GENERAL

Definitions

- **Beyond Visual Line of Sight (BVLOS):** Operations where the UAS is flown at a distance where visual contact is not maintained.
- **Certificate of Authorization (COA):** Authorization issued by the FAA for specific UAS operations.
- **Federal Aviation Administration (FAA**): The agency of the United States Department of Transportation with the authority to regulate and oversee all aspects of American civil aviation.
- **Navigable Airspace:** Airspace at and above minimum flight altitudes necessary for aircraft navigation.
- **Notice to Airmen (NOTAM):** Notice containing essential flight operation information.
- **Public Aircraft Operator (PAO):** Government entities that operate aircraft for governmental purposes.
- **Personal Identifying Information (PII):** Information used to trace an individual's identity.
- **Remote Identification of Drones (Remote ID):** The ability of a drone in flight to provide identification and location information that can be received by other parties through a broadcast signal. The FAA rule on Remote ID requires that all Unmanned Aircraft Systems that require registration broadcast identification and location information of the drone and control system.
- **Remote Pilot-in-Command (RPIC):** Individual responsible for UAS operation and safety during flight.
- **Support Personnel:** Individuals assisting the Remote Pilot or Visual Observer in UAS operations.
- **UAS (Unmanned Aircraft System), colloquially called Drone:** Unmanned aircraft and equipment necessary for safe and efficient operation.
- **UAS Flight Crew:** Team responsible for UAS operation, typically including a Remote Pilot and Visual Observer.
- **UAS Operation:** Operation using UAS within the city jurisdiction for city-related activities.
- **Visual Line of Sight (VLOS):** Ability to see the UAS unaided, except by corrective lenses.
- **Visual Observer:** Person assisting the Remote Pilot in maintaining situational awareness during UAS operation.

Operational Guidelines

This policy mandates adherence to all federal regulations, specifically FAA regulations, including 14 CFR Part 107, state, and local laws, including Carson Municipal Code sections 41601-41605, ensuring safe, responsible, and compliant UAS operations across all city departments and operations by contracted organizations within city boundaries that hold approved FAA COAs, waivers, or are recognized as PAOs. This policy emphasizes the importance of privacy considerations and public safety in all UAS activities. Each city department is responsible for interpreting and applying these guidelines in a manner that suits their operational needs while remaining within the policy's framework. The policy encourages inter-departmental collaboration for efficient use of UAS resources, facilitating shared understanding and application of best practices in UAS operations. This approach ensures a unified citywide standard for UAS usage while allowing individual departments the flexibility to operate effectively within their specific contexts.

Training and Certification
This policy underscores the importance of training and certification for personnel involved in UAS operations. It mandates that Remote Pilots acquire and maintain FAA Part 107 Remote Pilot certification, ensuring their proficiency in safely and legally operating UAS (https://www.faa.gov/uas/commercial_operators/become_a_drone_pilot). Regular training updates to this policy are intended to keep pace with evolving regulations and technological advancements. The overarching aim is to cultivate a high standard of competence among UAS operators, enhancing both safety and operational efficacy in the city's UAS activities.

Remote Pilot:
- Must hold an FAA Part 107 Remote Pilot Certificate with a Small UAS Rating to operate aircraft under 55 lbs.
- Requires passing an initial aeronautical knowledge test or completing a commercially available training course, if already holding a Part 61 pilot certificate.
- Must maintain aeronautical knowledge recency every 24 months.

Visual Observer:
- While not mandated by the FAA to hold a certificate, training should focus on assisting the Remote Pilot in maintaining a visual line of sight and environmental situational awareness.
- Should be familiar with UAS operations and airspace rules as relevant to their role.

Support Personnel:
- Should receive training on their specific roles (e.g., safety officers).
- Training should include an overview of UAS operations, focusing on safety and emergency procedures.

Legal and Privacy Considerations
The goal of this policy is to ensure UAS operations are conducted responsibly, uphold legal standards, and respect individual privacy and rights.

- **Adherence to Legal Standards:** Operations must follow California Civil Code section 1708.8, preventing the offensive capture of visual images or impressions in settings where individuals have a reasonable expectation of privacy.
- **Privacy Protections:** Operations must reinforce respect for personal privacy and prevent invasive practices. UAS operators are required to avoid capturing any offensive visual images, sound recordings, or other physical impressions in scenarios involving personal or familial activities in private settings. UAS operators must abide by CA Penal Code Section 402, which makes it a misdemeanor to sightsee at an emergency.
- **Public Records Compliance:** All UAS data will be subject to the California Public Records Act, ensuring transparency in data handling and accessibility. All UAS data will be subject to disclosure to the extent required by the California Public Records Act.
- **Prohibitions to Protect Rights:** Practices that violate constitutional rights, such as invasive surveillance, harassment, or the use of facial recognition technologies, are strictly prohibited.

III. PROCEDURE

Operational Safety Protocols
This subsection is crafted in accordance with the guidelines set forth in 14 CFR Part 107, ensuring compliance with Federal Aviation Administration (FAA) regulations. This section outlines detailed procedures for pre-flight planning, regular equipment inspections, safety meetings and training, and

protocols for incident reporting. These protocols are designed to uphold the highest standards of safety in UAS operations, addressing risks proactively and ensuring preparedness for any potential incidents. Refer to 14 CFR Part 107 for all operations. An incident is defined here as an event or occurrence involving a drone (UAS) that could potentially compromise safety but does not meet the threshold of an accident. Incidents might include situations where there is a risk of harm to people, property other than the drone itself, or other aircraft, but no substantial damage or serious injury occurs.

Examples of incidents in UAS operations include:

- A drone coming dangerously close to other aircraft, posing a risk of collision (a near miss).
- A drone losing communication or control link with the operator but landing without causing injury or significant damage.
- A drone crashing on the ground without causing injury or significant damage.
- A drone inadvertently enters restricted or sensitive airspace without authorization but without causing harm.

    - If a drone is involved in an accident, the Remote Pilot must follow the city policy governing accidents. In addition, the Remote Pilot is required to report the accident to the FAA within 10 days if it results in at least serious injury to any person or any loss of consciousness or if it causes damage to any property (other than the UAS or drone) in excess of $500 to repair or replace the property (whichever is lower), in accordance with the FAA regulations. The Remote Pilot is also required to immediately report the accident to the Department of Public Safety Services.

Registration

- Certify that the UAS is registered with the FAA and that its registration is up to date.
- Ensure that the UAS has a Remote ID module, as required by the FAA, and that this module is registered with the FAA per the rule on Remote ID.

Pre-Flight Planning and Hazard Analysis:

- Determine the UAS's certification for specific operations, particularly flights over populated areas, to ensure compliance with FAA Part 107.
- Familiarize with the UAS's operational limitations, including altitude, speed, and proximity to obstacles, as outlined in FAA Part 107 to maintain safe and legal flight conditions.
- Confirm that the UAS meets the necessary design and production standards for the intended flight category of operations.
- Inspect the UAS to ensure there are no safety defects.
- Map out the flight path, considering airspace restrictions and potential conflicts.
- If planning to fly in controlled airspace, submit a request for Low Altitude Authorization and Notification capability (LAANC) approval using one of the FAA-approved LAANC providers.
- Check weather conditions, including wind speed and visibility.
- Evaluate the local environment for obstacles and ground risks (e.g., power lines, buildings).
- Assess communication and control link reliability.
- Plan for emergency landing zones along the flight route.

Regular UAS Inspections:

- Verify battery health and charge levels.
- Inspect the structural integrity of the UAS, including propellers and motors.
- Test control and navigation systems functionality.
- Confirm communication equipment is functioning correctly.
- Check any attached payloads for secure mounting and operation.

Safety Meetings and Training:

- Review recent changes in UAS regulations and airspace guidelines.
- Analyze past UAS operation incidents or near-misses for learning.
- Conduct scenario-based training exercises.
- Reinforce emergency procedures and communication protocols.
- Update on new technology or equipment changes.

Incident Reporting and Response:

- Immediately report any UAS-related incidents to Risk Management and the Department of Public Safety Services.
- If a mission must be aborted for safety reasons, follow the manufacturer's emergency operational protocols for the specific UAS aircraft, which includes safely landing the UAS and incident reporting.
- Conduct a thorough investigation of the incident to analyze causes and implications to be included in future risk mitigation efforts and provide results to Risk Management.
- Document all incidents and near-misses for shared learning.
- After an incident, the involved UAS must undergo a detailed inspection before the next operation to ensure airworthiness.

Approval and Oversight

Project and Mission Approval Process:

- Set advisories to notify city departments of any events or incidents where drone operations should be limited. City department operators must check for these advisories and contact the Carson Sheriff's Department if planning to operate a drone in the vicinity or within the area of the advisory.
- Implement and utilize an electronic database or software for submitting and tracking UAS projects and missions. Each submission must include specific details such as objectives, locations, and planned timelines.
- The Innovation, Sustainability, and Performance Management Department will regularly review the database, ensuring all missions comply with policy standards and identifying trends that may require policy updates.

Creation and Role of an Oversight Committee:

- Form an oversight committee comprising city officials knowledgeable in UAS operations, legal standards, and public safety.
- The committee's role includes evaluating the effectiveness of UAS operations, ensuring adherence to policy, and providing guidance on necessary policy modifications.

Regular Review and Assessment:

- Conduct quarterly assessments of UAS operations to ensure alignment with city goals and FAA regulations.

- The oversight committee should review assessments, incident reports, operational trends, and any new state or federal UAS regulations for continuous improvement and adherence to safety and legal standards.

Equipment, Crew, and Asset Management
This section focuses on maintaining and managing UAS resources efficiently, including flight crews. It outlines procedures for tracking UAS assets, maintaining them regularly, reviewing their usage for operational effectiveness, and analyzing deployment records. These measures are designed to ensure the longevity, readiness, and optimal use of UAS assets, supporting effective decision-making for asset maintenance and future investments.

- **UAS Inventory Management:** Track all UAS assets in a centralized database or software, including details like model, serial numbers, acquisition dates, and condition status.
- **Regular Maintenance Schedule:** Follow specific manufacturers' guidelines as a maintenance schedule for each UAS, including routine inspections, preventative maintenance, and unscheduled repairs. Track all costs to inform budget decisions.
- **Asset Utilization Review:** Review the usage of each UAS quarterly to assess its effectiveness and efficiency in current roles and identify potential needs for additional assets.
- **UAS Deployment Records:** Review UAS deployment records, including operational hours, purposes, and locations used, to identify patterns in wear or breakdowns, and determine when to plan for asset replacement or upgrades.
- **Crew Resource Management (CRM) in UAS Operations:** Implement CRM practices to enhance decision-making, communication, and operational efficiency among UAS crew members. CRM focuses on the effective use of all available resources, including human, hardware, and information resources, to achieve safe and efficient UAS operations. This will involve recurring training to ensure that crew members are skilled in areas such as aeronautical decision-making and judgment, effective communication, and teamwork.
- **Continuous Training for Crew Members:** All UAS crew members will complete recurring training, ensuring they remain knowledgeable about the latest UAS technologies, operational procedures, and FAA regulations. Training should cover a range of topics, including the effects of weather on UAS performance, emergency procedures, and any updates to FAA regulations related to UAS operations.

Data Management
This section outlines key procedures for handling UAS-related data within the city. It emphasizes secure storage and regular backups, restricted access to authorized personnel, alignment with city data policies, and guidelines for responsible data handling. This section aims to ensure the security and confidentiality of UAS data, compliance with legal and policy standards, and effective management of data access and retention.

Data Storage and Security: The Information Technology and Security Department is responsible for encrypted and secure storage of UAS data and data collected by UAS. Regular data backups should be conducted, using secure cloud or physical storage systems.

Access Control: Access to UAS data is controlled by the Director of Information Technology and Security Department or designee, except as necessary to respond to Public Records Act requests,

in which case the City Clerk would need to review and approve the disclosure of UAS data. An access log system should be implemented to audit data access by these roles.

City Policy Alignment: UAS data management practices must comply with the city's existing data retention and privacy policies, with annual reviews for ongoing compliance.

Responsible Data Handling

- **Designated Data Handlers:** The Director of Information Technology and Security or designee will oversee UAS data handling.
- **Data Retention Period:** Retain UAS data for at least three years, after which it should be securely deleted or archived.
- **Data Access and Sharing:** Requests for data access and sharing will be coordinated through the Director of Information Technology and Security or designee. This access should be granted strictly for city-approved purposes. Purpose of access and identity of the requester will be documented and recorded. Personal use or unauthorized sharing is prohibited.
- **Breach Notification:** Immediately notify the Department of Public Safety Services, Department of Information Technology and Security, and the City Manager's Office in case of a data breach, in line with privacy laws and city policies.

IV. UAS Use Cases

The list below demonstrates UAS use cases relevant to the City of Carson. The list is not designed to be all-inclusive. All potential UAS use cases and use of drones by the City of Carson and its contractors are subject to all the requirements set forth in this policy. Information in this section shall not be construed to supersede any requirement of the policy or authorize a particular use of a drone in violation of any provision of the policy.

- Inspections: Performing surveys and assessments of properties and assets, including bridges, building exteriors, facades, rooftops, and assets located in difficult-to-reach areas such as solar panels and roof-mounted AC units.
- Construction Management: Conducting inspections of project sites to ensure contract and environmental compliance, documenting areas of erosion, and creating informational materials for progress reports and completed projects.
- Disaster Response: Utilizing drones for aerial reviews of disaster-affected areas, conducting initial damage assessments during and after natural disasters or emergencies, and capturing aerial views of affected areas, properties, roadways, and assets, including hazardous material incidents.
- Environmental Monitoring & Documentation: Inspecting vegetation types and health, wildlife, and waterways, as well as assessing the condition and health of City-owned street trees.
- Marketing, Public Outreach, and Video Production: Using drones to capture video and still photographs as elements of City video productions and for educational and outreach purposes.
- Surveying and Mapping: Deploying drones equipped with various sensors, such as high-resolution cameras, LiDAR (Light Detection and Ranging), thermal sensors, and multispectral cameras, to capture detailed images and measurements of the City’s surface and features.

- Public Safety: Utilizing drones for emergency response and safety operations. Drones can provide real-time intelligence to public safety personnel in the field, enabling them to quickly develop a plan to de-escalate situations before the personnel arrive on the scene.
- Security: Using drones for surveillance and monitoring, crowd monitoring, and perimeter security to enhance the City's existing security capabilities.
- Testing and Training.

V. EXCEPTION

The Los Angeles County Sheriff's Department and the Los Angeles County Fire Department are exempt from this policy. There shall be no other exceptions to this policy, except through direct instructions of the City Council.

VI. BY THE AUTHORITY OF THE CITY COUNCIL, AS APPROVED ON

March 6, 2024	
Date	Agenda Item No.

Exhibit No. 1