MONROE COUNTY SHERIFF'S OFFICE

General Order

CHAPTER: 042		**TITLE:** Unmanned Aircraft Systems (UAS)
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REFERENCE:		**RESCINDS:**
Sheriff of Monroe County		

I. PURPOSE:

A. The purpose of these Standard Operating Procedures are to provide guidelines for MCSO employees on the operation, maintenance and training procedures for departmental Unmanned Aircraft Systems (UAS) as well as procedures for the retrieval, dissemination, and storage of captured images/data.

B. The purpose of Unmanned Aircraft Systems Unit (UAS) utilization is to:

1. Conduct search and rescue operations

2. Assist with Fire Rescue life safety operations such as:

a. Search and rescue

b. Firefighting efforts

c. Hazardous materials response

3. Assist in locating missing/endangered persons

4. Enhance response and personnel safety during SWAT operations

5. Improve disaster response including post damage assessment

6. Facilitate community outreach by working with the Special Events Unit

7. Locate fleeing suspects or escaped prisoners

8. Assist law enforcement operations in the case that a law enforcement officer possesses reasonable suspicion that, under particular circumstances, swift action is needed to prevent imminent danger to life or serious damage to property

9. Counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is such a risk

10. UA may also be used for MCSO training and non-evidentiary, non-criminal law uses as authorized by the Sheriff or his designee

11. Reduce costs of aerial photography/videography

II. DISCUSSION: The Monroe County Sheriff's Office (MCSO) Unmanned Aircraft Systems (UAS) Unit is a regional public safety unit consisting of MCSO deputies. The unit was created to enhance the availability for public safety uses. All Remote Pilots shall be certified under FAA CFR 14 Part 107, and trained in accordance to MCSO training procedures.

III. ACRONYMS AND DEFINITIONS:

A. ATC (Air Traffic Control): A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

B. FAA (Federal Aviation Administration): The division of the United States Department of Transportation that is a national authority with powers to regulate all aspects of civil aviation.

C. FSDO (Flight Standards District Office): A locally affiliated field office of the United States Federal Aviation Administration.

D. NAS (National Airspace System): The common network of U.S. airspace, air navigation facilities, equipment, and services; airports or landing areas; aeronautical charts, information and services rules, regulations, and procedures; technical information; and manpower and material.

E. Part 107: The portion of Title 14 Code of Federal Regulations (CFR) that allows the operation of unmanned aircraft systems (UAS) in the National Airspace System (NAS) for purposes other than hobby and recreation. The rules are specified in 14 CFR Part 107 and address UAS classification, certification and operating rules.

F. RPIC (Remote Pilot in Command): An MCSO-authorized person who holds a current remote pilot certificate with a UAS rating and has the final authority and responsibility for the operation and safety of the UAS.

G. Remote Pilot: A member of the Monroe County Sheriff's Office who operates Unmanned Aircraft Systems on behalf of MCSO. The Remote Pilots shall be certified under CFR 14 Part 107 and trained in accordance with MCSO training outlines.

H. UA (Unmanned Aircraft): an aircraft that can navigate without a human pilot on board; a drone.

I. UAS (Unmanned Aircraft System): An unmanned aircraft and its associated elements related to safe operations, which may include control stations (ground, ship, or air-based), support equipment, payloads, flight termination systems and launch/recovery equipment. It consists of three elements: Unmanned Aircraft, Control Station and Data Link

J. VLOS (Visual Line-Of-Sight): The RPIC or Visual Observer shall be able to see the Unmanned Aircraft without the aid of binoculars or other device besides corrective eyeglasses or contact lenses.

K. VO (Visual Observer): A person acting as a flight crewmember to help see and avoid air traffic or other objects in the sky, overhead or on the ground.

L. CRM (Crew Resource Management): The effective use of all available resources for flight crew personnel to assure a safe and efficient operation, reducing error, avoiding stress and increasing efficiency.

IV. POLICY:

A. EQUIPMENT: All MCSO equipment will be maintained by assigned employees in accordance with the Sheriff's Policy Manual.

B. ORGANIZATIONAL POSITIONS AND DUTIES:

1. **UAS TEAM LEADER (UAS TL):** will report to the MCSO Captain of Support/Services and will be responsible for ensuring compliance as outlined in the MCSO Sheriff's Policy Manual. The UAS Team Leader will also serve as liaison with the FAA regarding any Federal Aviation Regulations (FAR). The UAS Team Leader is responsible for:

    a. UAS staff, equipment, flight and flight standards/training

    b. Keeping all records pertinent to the UAS unit including budget, financial records and statistics

    c. Performing inspections on a routine basis to ensure compliance with all MCSO and UAS policies

    d. Maintaining a current FAA Part 107 certificate

    e. Communicating with the FAA and the local FSDO. Ensuring prompt reporting, filing and follow-up action on accident reports to the appropriate agencies

    f. Assuring all flight operations are conducted safely and in compliance with all FARs and this manual

    g. Terminating the flight status of any mission due to safety concerns

    h. Verifying that all Remote Pilots maintain current qualifications

    i. Ensuring that all Remote Pilots are provisioned with all necessary flight-related materials, checklists and equipment

    j. Ensuring any new unit members are properly trained and meet all qualifications

2. **REMOTE PILOTS:** work under the supervision of the UAS TL.

    a. Remote Pilots will work under the supervision of their respective supervisors. Any UAS/flight-related issues will be reported to the UAS TL.

    b. All Remote Pilots will have a valid FAA Part 107 UAS Pilot's certificate. They will be trained on the UAS model to be used. They will have, in their possession, a valid remote pilot certificate and driver's license.

    c. The Remote Pilots will conduct proper Crew Resource Management (CRM) during all operations.

    d. On all missions, Remote Pilots will obtain information regarding purpose, weather, operational requirements, special instructions and procedures. They will determine the applicability of UAS deployment as it relates to CFR 14 Part 107, FSS 934.50 and any waivers in use by the agency. Factors to be considered will, at minimum, include the following: altitude, terrain, weather, range, nearby airport facilities, nearby deployment surroundings, scene safety and consideration of other resources for completing the airborne mission.

    e. Remote Pilots will ensure that all required documents, checklists and appropriate portions of this policy are available for use in the RPIC's immediate vicinity. The RPIC will ascertain that the UAS is airworthy and safe for use in accordance with issued checklists and manufacturer specifications.

    f. The RPIC is responsible for operating the UAS in accordance with applicable FARs, waivers, policy, FSS and the UAS training lesson plan.

g. The RPIC is responsible for the safety and security of the UAS and nearby ground personnel/civilians. It is the responsibility of the RPIC to ensure that a proper preflight has been conducted on the UAS prior to launch. All preflight checks will be conducted in accordance with issued checklists.

h. The RPIC will ensure that all involved personnel have been properly briefed.

i. The RPIC may delegate functions to other personnel but will still be responsible for all aspects of the operation.

j. RPICs must be knowledgeable of this policy, FAA Regulations, FSS 934.50 and other instructions pertinent to their duties.

k. The RPIC has final authority in determining whether a UAS deployment will or will not be conducted after considering all pertinent factors. The RPIC has the authority for the safe, efficient and professional conduct of her/his flight assignment. The RPIC will have command over the UAS and the entirety of its operation. They are expected to make sound judgments and advocate CRM.

l. The Remote Pilot is responsible for notifying the UAS TL of any damages, injuries or technical issues resulting from the operation of the UAS.

3. VISUAL OBSERVER: A Visual Observer (VO) can be any person that has been briefed and understands the requirements of the visual observer position and the responsibility it entails. A VO shall be designated as such by the RPIC prior to all MCSO-approved UAS operations. VOs will assist the RPIC during operations and work under the direct supervision of the RPIC. VOs will receive training on their duties and responsibilities prior to operation and will:

a. Assist the RPIC in maintaining Visual Line of Sight (VLOS) of the in-flight UA

b. Assist Remote Pilots as necessary and as dictated by the RPIC

c. Alert the RPIC of any observed manned aircraft in the area

d. Aid the RPIC by being alert to conditions which could create hazards to flight safety

V. OPERATING PROCEDURES: UAS staff will adhere to all MCSO policies and procedures specifically set forth for UAS to include the UAS SOP Manual, Operations Orders and checklists. MCSO employees assigned to the UAS Unit will adhere to FAA regulations and Florida state statutes while preserving the privacy and civil liberties of the public. Only MCSO personnel trained in accordance with Standard Operating Procedures set forth by this document and the CFR 14 Part 107 may operate MCSO UAS. All MCSO-authorized Remote Pilots will comply with all departmental training procedures and will maintain applicable FAA licensure. MCSO personnel will comply with all procedures outlined in these Standard Operating Procedures including, but not limited to, recording protocols, downloading of video data, report writing, evidence handling, inspection and maintenance of Unmanned Aircraft (UA) and associated equipment. All electronic evidence obtained by utilization of UAS is property of MCSO.

A. PROHIBITED USES AND ACTIONS:

1. MCSO Unmanned Aircraft Systems (UAS) shall not be used for personal business of any type.

2. MCSO UAS will not be used for any operation that contradicts manufacturer's recommendations/instructions for the UAS being operated.

3. MCSO UAS will not be used in any operation that is in conflict with any Florida State Statute and/or any FAA rules and regulations.

4. MCSO UAS will not be used in any operation that is in conflict with Monroe County Sheriff's Office Policy and/or SOP.

5. No MCSO employee, unless assigned to the MCSO UAS Unit, will utilize a UAS of any kind in the performance of his/her duties without the written approval of the UAS team leader.

6. No personally-owned UAS or any other non MCSO-owned UAS will be used by any employee in the performance of his/her duty assignment. Any deviation of this part will require the written approval of the UAS TL.

7. No supplemental equipment will be attached to any UA without permission from the UAS TL.

B. AUTHORITY:

1. Remote Pilots have absolute command of their UAS.

2. The Remote Pilot will have the final authority and responsibility to cease any air operation or refuse any assignment where, in the Remote Pilot's opinion, the UAS and/or ground personnel/civilians are placed in jeopardy due to weather or other hazardous conditions. At the end of their shift, Remote Pilots will report in writing to the UAS TL, the reasons for any cancellation or refusal of flights due to safety.

3. As provided by FAA regulations, while MCSO UA are in flight, the RPIC is authorized and responsible for making all decisions regarding use of the UA including, but not limited to, direction of craft, duration of air time, abilities of the UA, use of affixed equipment and allowance or advisability of affixing additional equipment.

C. REQUESTING UAS RESPONSE:

1. Requests for UAS Response will be made through Communications who will contact an available Remote Pilot. Members assigned to the UAS Unit will be listed as Remote Pilots on a roster provided to Communications.

2. Feasibility of UAS response will be determined on a case-by-case basis with the ultimate decision made by the Remote Pilot who will be conducting that flight.

3. The UAS call-out will be noted in an Incident Report (Department of Law Enforcement).

D. FLORIDA STATE STATUTE COMPLIANCE (Title XLVII Chapter 934.50): MCSO personnel will comply with the FSS 934.50, the "Freedom from Unwarranted Surveillance Act", when utilizing Unmanned Aircraft Systems.

1. Evidentiary Compliance: When evidence is to be gathered using a UAS, a judge-signed search warrant authorizing the use of this UAS must be obtained in accordance with 934.50 (4)(b) unless other exceptions apply.

2. Privacy considerations: MCSO personnel will not record or transmit images utilizing a UAS of property or persons where a reasonable expectation of privacy exists unless exceptions to 934.50 (3)(b) are met.

E. INSPECTIONS:

1. A thorough preflight will be completed on each issued UAS at the beginning of each shift, in accordance with issued checklists.

2. Prior to each operation throughout the Remote Pilot's shift, an inspection will be completed in accordance with issued checklists to ensure UAS airworthiness.

3. A post-flight inspection will be completed at the end of each operation.

F. GENERAL OPERATING PROCEDURES:

1. Prior to launch, the following steps will be taken by the RPIC:

   a. The Remote Pilot will locate and designate a properly trained VO for any non-training UAS operation.

   b. The Remote Pilot will designate a safe take-off and landing area.

   c. The Remote Pilot will confirm that the UAS operation is legal, constitutional and safe.

2. **MCSO Aviation Support:** During operations where MCSO Aviation is present on scene, UAS deployment is prohibited unless approved by the Major of Law Enforcement or the Director of Aviation.

3. **Vehicle response:** Remote Pilots will refer and adhere to MCSO GO Chapter 32 - Patrol for incident responses.

4. **Preflight briefing:** A briefing led by the RPIC will be conducted prior to all UAS operations which will include, but is not limited to:

   a. Review of the mission's goals and expected outcomes

   b. Review of current and forecasted weather conditions

   c. Review of current Notice to Airmen (NoTAMs) and Temporary Flight Restrictions (TFRs) that have been issued for the proposed flight area

   d. Review of nearby airports and airspace and any MCSO-approved waivers that may apply to operation

   e. Identification of mission limitations and safety issues such as battery charge, GPS strength and potential for radio interference

   f. Review of proposed flight area including maximum ceiling and floor

   g. Review of communication procedures between RPIC, VO and other personnel used to support the mission including verifying cell phone numbers used to communicate with ATC in the event of a fly-away or other flight emergency

   h. Review of emergency/contingency procedures including aircraft system failure, flight termination, divert and lost-link procedures

   i. Execution of a preflight check utilizing the approved checklist

G. SAFETY:

1. **General Safety:** Remote Pilots assigned to the MCSO UAS Unit are the only members authorized to operate any of the MCSO-owned UAS. This may be waived only if a member is specifically being considered for assignment as a Remote Pilot in the UAS unit, already possesses all minimum requirements and qualifications for a Remote Pilot and is approved by MCSO administration to receive flight training for the position.

2. **Operational Safety:** The following steps will be taken to enhance operational safety:

a. Safety will be promoted through training, attention to duty, sound decision making, Crew Resource Management and exercise of good judgement at all times.

b. Sterile cockpit procedures will be adhered to during critical phases of flight.

c. During critical phases of flight, no activities that may distract or interfere with said flight, such as nonessential conversations, may be permitted. Critical phase means when the UAS is in flight.

d. If, at any time, the UA malfunctions or does not operate to the manufacturer specifications, the UAS operation will be terminated and the UA will be grounded until all necessary repairs are made.

3. Flight operations:

a. Remote Pilots will follow all issued checklists during MCSO UAS operations.

b. The UAS will be kept in Line of Sight of the RPIC or the designated VO at all times while in flight.

c. At no time will the RPIC relinquish control of the UAS flight controller while the UAS is in flight; except as applicable in the case of an emergency or during training.

d. Remote Pilots will ensure that the battery in use in the UAS is newly charged prior to UAS launch.

H. MAINTENANCE:

1. A maintenance logbook will be maintained for each individual UAS and its associated batteries.

2. The following items will be recorded in the UAS maintenance logbook:

a. All repairs

b. Replacement batteries and the date on which each battery was put into service

c. All replacement parts

3. The Team Leader will be responsible for updating the firmware of any UAS

4. All Remote Pilots will be responsible for notifying the UAS TL for any necessary repairs or replacement parts for the UAS.

I. UAS STORAGE: All issued MCSO UAS will be stored according to manufacturer recommendations.

J. DOCUMENTATION:

1. Each individual Remote Pilot will be responsible for maintaining a flight log of all UAS flight time, to include all operations and training. This UAS logbook will be made available to the UAS TL upon request.

2. All UAS flight time will be recorded in the UAS logbook specifically issued to that UAS.

3. Documentation will be completed through an offense report.

K. TRAINING: All Remote Pilots will be trained in accordance with internal training outlines. MCSO internal training will cover all essential areas including specific information for each UAS in use, FAA Part 107 regulations, weather reporting, emergency procedures, practical flight training, applicable Florida state statutes and SOP.

1. All Remote Pilots will undergo recurrent quarterly training.

2. Prior to conducting any operational mission, the Remote Pilot will have received training on the specific UAS model to be used.

L. UAS ACCIDENTS:

1. General: All accidents involving MCSO UAS will be reported through the chain of command immediately following the incident. All accidents will be internally documented via an official incident report (DLE). MCSO Risk Management will be notified in the case of any injury or property damage within 24 hours following the accident.

2. Accident reporting: Accident reporting will be conducted in accordance with CFR 14 Part 107.9. All FAA notification will be handled by, or under the supervision of, the UAS TL. The following incidents will require notification to the FAA no later than 10 days following the incident.

a. Serious injury to any person or any loss of consciousness

b. Damage to any property, other than the small unmanned aircraft, unless one of the following conditions is satisfied:

1) The cost of repair (including materials and labor) does not exceed $500 or

2) The fair market value of the property does not exceed $500 in the event of total loss

M. WEATHER:

1. Remote Pilots will ensure that they have 3 statute miles of visibility during flight.

2. Remote Pilots will operate UAS at minimum 500 feet below clouds and 2,000 feet laterally.

3. Remote Pilots will assess flight condition, including winds, prior to flight to ensure that controllability of the UAS will be maintained during the operation.

4. UAS Operations will be avoided near active thunderstorms.

5. Remote Pilots can obtain pertinent weather information through the following approved sources:

a. www.aviationweather.gov

b. www.1800wxbrief.com

c. www.NOAA.gov

d. A check of any of the preceding sources will not be a replacement of the UAS Remote Pilot's own visual observation at the incident location.