



Wyoming County Emergency Services Policy and Procedure

Unmanned Aerial System

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References:	Federal Grants Directorate Information Bulletin 426, Presidential Memorandum Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems
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POLICY:

It shall be the policy of the Wyoming County Office of Emergency Services (hereinafter referred to as "department") to utilize Unmanned Aerial Systems (UAS) to enhance the department's ability to assist in protecting public health and public safety while providing and strictly adhering to the guidelines for the safe and effective operation of an UAS.

Any application of the UAS will be in accordance with Federal, State and local laws, to include constitutional privacy rights, search and seizure regulations and Federal Aviation Administration (FAA) regulations.

DEFINITIONS:

- A. Department – Wyoming County Office of Emergency Services
- B. Public Safety Purpose – Any flight that:
 - 1. has been approved by a court of competent jurisdiction;
 - 2. is for a legitimate public safety or routine law enforcement purpose;
 - 3. is necessary to assist in locating a fugitive, the victim of an abduction or kidnapping, providing for officer or public safety or assisting in managing or preparing to manage the response to an emergency caused by any natural or manmade disaster or threat of harm to the public;
 - 4. has been approved by the UAS supervisor for training, demonstration or UAS maintenance or testing purposes.
- C. Routine Law Enforcement Purpose – Any law enforcement activity that does not require judicial approval under the statutory or decisional law of the jurisdiction.
- C. Unmanned Aircraft System (UAS) – Any powered aerial device which:
 - 1. does not carry a human operator;
 - 2. uses aerodynamic forces to provide vehicle lift;
 - 3. can be programmed to fly autonomously or can be piloted remotely;
 - 4. can serve as a platform for devices or systems which are capable of:
 - a. photographing persons, objects or mapping surface or geological formations and storing or transmitting the captured images;

- b. tracking or detecting persons or objects using infra-red, thermal or any similar technology and storing or transmitting the captured information;
- c. engaging in the real time video recording of the movements of persons or objects and storing or transmitting the captured information; and
- d. detecting and capturing aural, digital or other forms of communication and storing or transmitting the captured communications.

D. UAS Operator – Also known as Remote Pilot in Command (RPIC). This is the individual responsible for the overall operation of the UAS. The RPIC is directly responsible for and is the final authority for the operation of the UAS. The RPIC is responsible for ensuring all operations are conducted within applicable laws and regulations and must be certified to Part 107 requirements.

PURPOSE:

The basic assumption is that a UAS provides an efficient and effective way for gathering information for the department and response partners. The UAS allows for a clearer understanding of the size and magnitude of an event and assists in deployment on incident resources. This allows the incident commander to gain better situational awareness of the incidents challenges that can be communicated to local, state, and federal officials.

The enhancement of situational awareness provides structure and details for hazard mitigation during the incident and sets the foundation for incident stabilization and post incident recovery. More importantly, this increased situational awareness positively impacts responder safety during firefighting, technical rescues, search operations, law enforcement, hazardous materials incidents and natural disasters.

During these incident types the UAS can safely and effectively be put into hazardous environments or areas that could potentially jeopardize responder safety. The situational awareness gained by immediate, 360 degree, visual feedback from both eye level and overhead cannot be matched by responders on the ground or by helicopters.

The value of UAS programs has been seen by first responder and emergency management organizations across the country. Local events over the past year specifically have also highlighted the need and value a UAS program would bring to enhance public safety within the County.

In addition to emergency response operations, a number of hazard mitigation assessment will also be completed with the UAS. Local municipalities may request UAS support to assist in evaluating creeks and streams for debris blockage and erosion or road and bridge assessments.

OBJECTIVE

To clearly define the conditions and parameters under which the department will operate and deploy a UAS within the County and mutual aid communities as a supplement to pre-planning, training, incident situational assessment, and incident command operations. The primary role of the UAS is insertion into emergent or ongoing events that pose a risk to public safety or threats to the County's infrastructure by providing "real time" hazard assessment utilizing high resolution cameras, infrared/thermal sensors, and night vision imagery.

CERTIFICATION AND TRAINING:

The department has trained the Director of Fire and Emergency Management as the departments UAS operator in accordance with aeronautical knowledge as stated in 14 CFR 61.105.

In addition to the training, the operator has become certified under Part 107 of the Federal Aviation Administration. Certification will be required for any OES staff or assisting agencies in operating the UAS.

The department will conduct routine training to maintain proficiency will flight operations. These training flights will be documented as to date, time, weather conditions, location and duration.

PROCEDURES:

1. Mission Specific Deployments - The department is responsible for overall coordination and incident support of first responder agencies throughout Wyoming County. This includes responses out of the county in which numerous county based agencies respond. The following are primary scenarios under which the department UAS can be requested, deployed and utilized:

Structure Fires – Deployment of UAS's to structure fires, in particular, structures which cover a large amount of square footage such as barns, industrial sites and commercial buildings, multi-story buildings, or buildings suspected of structural compromise.

Hi/Low Angle Rescue Incidents – Deployment of UAS's to support county Rope Rescue Team to verify the existence and location of lost or injured persons who have called 911 for assistance while in hiking, camping or climbing and/or confirm the safest and most effective means of dispatching Department rescue team members to make contact with such persons.

Swift Water / Ice Water Incidents – Deployment of UAS's to creeks, streams, ponds or lakes during weather events or when a subject(s) may become trapped, swept away or incapacitated in moving or frozen waters for the purpose of verifying the existence of and identifying the location of individuals.

Wildfires – Although Wyoming County does not see wildfire conditions, a rural farming community with a vast amount of vegetation acreage leads to multi-acre grass fires. These fires spread fast in early spring or dry summer conditions across fields and into woods. The hills and valleys throughout the county often lead to access issues for firefighters to fight the fire and determine safe and effective locations to enter fields. The UAS would allow the incident commander the ability to determine the spread of the fire and terrain to implement a safe and effect response.

Natural Disaster Response and Assessment – Deployment of UAS's to evaluate impacted areas following natural disasters such as ice storms, snow storms, floods, or wind events. UAS will allow the department and local officials to collect visual images of the area impacted and gain visibility to areas which be inaccessible due to downed trees or wires, flooded or washed out roadways, or other hazardous conditions.

Hazardous Material Mitigation – Deployment of UAS's with thermal imagery, high resolution camera to identify products, assist in determining impacts, runoffs and exposures during hazardous materials releases or spills.

Search and Rescue – Utilizing Infrared (IR) sensors to locate a lost or missing person to aid in search, rescue or recovery.

Structure Collapse/Confined Space Search and Rescue – Deployment of UAS's utilizing IR sensors to provide night-vision footage to track heat signatures of bodies, pinpointing the locations of survivors, and providing hazard assessment for rescuers access and egress.

Law Enforcement Activities – Requests from law enforcement activities such as crime scene assessments or events in progress. All applicable federal, state and local laws as well as law enforcement policies and procedures related to privacy shall be followed.

Pre-Incident Planning – Conducting assessments for pre-planning of mass gatherings, trainings or exercises, critical infrastructure or hazardous materials site planning operations. Any planning efforts involving private businesses will receive prior approval to fly above or around, gather images or video of the site and operations.

Planned Training Events – Use of UASs for training and exercises intended to simulate any of the above mentioned “real” scenarios and maintain proficiency in flight operations. Use of UASs for training and exercises will be limited to county owned property, or local fire stations or municipalities with prior approval.

Hazard Mitigation Assessments – Assisting county agencies and local municipalities with hazard mitigation assessments such as erosion, critical infrastructure, road and bridge assessments to determine appropriate projects, access or conditions.

2. Flight Procedures

- The department's UAS **will not** be used to monitor members of the public or provide surveillance for law enforcement purposes. Its intended use is to provide greater situational awareness to incident commanders thereby enhancing responder safety in response to and mitigation of emergent situations and incident types unrelated to citizen monitoring or surveillance.
- The department UAS will only be operated by trained, certified FAA Part 107, licensed members of the department. Through an agreement with the county health department, trained and certified health department staff may operate the UAS if OES does not have staff available. Health Department staff will review this departments policy prior to operation of the department UAS or for any operations related to public safety.
- The UAS will be used for department related purposes only. The department might, as part of regional partnerships, Mutual Aid or Automatic Aid agreements, operate the UAS outside of “county” boundaries when requested by other municipal or public safety entities.
- The UAS will **NOT** be lent to any other department or agency. However, if dispatched or properly requested, the UAS, operated by a department UAS team member(s), can be utilized in mutual aid request.
- For department UAS flights during live incidents, the UAS Operator SHALL ensure or request the UAS be added to the existing incident. In all cases, incident information SHALL include: launch time, exact location, pilot in charge, mission type and UAS ID. Each flight will also be tracked internally by OES staff.
- The UAS flight team will conduct a pre-flight assessment of the incident environment to ensure the proposed operation is within department UAS policy and Part 107 regulations. The UAS Operator will determine if safe operation of the UAS can be accomplished as requested. The decision will be contingent upon several factors to include physical features of the area, obstructions to flight, terrain, and the weather. **The UAS Operator will make the final determination if flight operations can be initiated.**
- The UAS operator will follow all manufacturers recommendations in pre-flight and post-flight inspections.

- The UAS operator will ensure visual sight of the aircraft at all times when deployed.

3. Safety Policy

- The department is committed to having a safe and healthy aeronautical workplace, including:
 - An ongoing pursuit of an accident free workplace, including no harm to people, equipment, the environment or property.
 - A culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel who, in good faith, disclose a hazard or safety occurrence due to unintentional or intentional conduct.
 - Support for safety training and awareness programs.
 - Conducting regular audits of safety policies, procedures, and practices.
 - Monitoring the UAS community to ensure best safety practices are incorporated into the organization.

4. Ground Safety

- The pilot and flight observer must always be aware of dangers to ground personnel from moving rotors.
- The pilot shall under no circumstances leave any unauthorized person in charge of the UAS controls while the UAS is running.
- If it is necessary for the pilot to leave the controls of the UAS, the UAS will be grounded, the engine will be shut down, battery removed, and the controls deactivated.
- Only mission essential personnel will be in proximity to UAS launch and recovery activities. When operating near populated areas, the pilot will ensure that a “defined incident perimeter” exists to limit the potential of persons being present beneath the UAS flight path. All flights around large assemblies of people will be in accordance with Part 107 regulations.

5. Night Flight Operations

- To assist the pilot, a secondary (auxiliary) Video Camera Remote Controller with a video monitor screen could be deployed for independent gimbal/sensor control.
- UAS team members should obtain the minimum altitude necessary to avoid obstructions in the operating area prior to nightfall if possible.
- Flight Observers must use caution to ensure the UAS remains within normal line-of-sight.
- The use of a UAS observer and the use of lighting and/or IR beacons to identify the launch/recover areas is highly recommended.

6. Lost Link Procedure

- If the UAS loses communications or loses GPS signal, the first step will be to hover in place and attempt to restore a link.
- In the event the operator is unable to restore a link, the UAS will be immediately returned to the takeoff site.

- In the event of a loss of GPS signal, the UAS will be operated manually until signal can be restored.
- In any loss of signal, if a threat to life is determined the UAS pilot will issue a “kill engine” command which will immediately ground the unit.

7. Loss of Visual Site

- A loss of visual site procedure will be followed anytime the pilot loses visual site of the UAS.
- The first step will be to hover the aircraft and try to reestablish visual contact.
- If unable to hover and reestablish contact, the pilot will initiate the lost link procedures.

8. Deconfliction of Aircraft within Operational Air Space

- All UAS flights shall be grounded upon arrival of approved manned aircraft entering the operational air space.
- Deconfliction shall be initiated by the UAS operator.
- It is the responsibility of the UAS operator and Flight Observer to confirm and maintain awareness of all manned aircraft activity during UAS operations.
- In the event a non-department UAS is identified in operational air space (incursion), the UAS Operator shall notify the Incident Commander and immediately ground the department aircraft.
 - Law enforcement will be made aware of the UAS and attempt to identify and locate the operator.
 - Prior to a return to flight, the department shall ensure the other UAS does not pose a hazard to the operations, and shall not fly if the hazard is still present.

9. Security Policy / Chain of Custody for Retained Material

- All recorded photo/video material related to a department emergency response shall be archived and cataloged immediately after the conclusion of the incident.
- All recorded photo/video material not related to a department response; i.e. planned training event, shall be archived and cataloged within 45 days of the flight.

• Records Retention

- Unless UAS data has been designated as a record exempt from public disclosure under the law of the jurisdiction in which the flight occurs the request shall be a public record. Such records shall be retained for at least one year before being purged. If such records, however designated, are related to a criminal investigation they shall be retained until that investigation is completed or until any charges filed are finally resolved.
- Data from each flight shall be recorded on a form which captures:
 - the name of the requesting party or a copy of the court order authorizing the flight;
 - the specific public safety purpose stated in support of the flight;
 - the name of the UAS Operator(s);

- the number of the file containing the downloaded information related to flight time and flight path; and
 - Any data collected by a UAS in the course of a flight which is not relevant to a criminal investigation, emergency response or mapping purpose described in shall be destroyed within 30 days of the termination of the flight on which they were collected;
 - Data collected for mapping or hazard mitigation projects will be retained for a period of 7 years from the date it was collected.
- The department strives to gain, develop and maintain the trust of the public and first responders it serves. The department's primary intention for integrating UAS technology into its initial actions of hazard mitigation and response matrix is to increase situational awareness to provide real time information for the Incident Commander. The intended purpose is not to share data captured, although the benefit of sharing recorded data may be in the best interest of public safety or public health.
- The department will not engage in the indiscriminate, unobscured publication of footage depicting non-department personnel. Visual data shall never be displayed on the County website or department social media pages if not in the best interest of the public.
- The department or any entity associated with the department UAS Program will not permit any retained visual data to be merged with other surveillance databases, or retained solely for the purpose of mining the data at a later time by the department or other agencies.
- It will be the department's policy and practice to retain visual footage after the conclusion of the emergent incident if that footage captured an unusual occurrence, such as: building compromise or collapse, large area involvement with fire (conflagration, flashover, backdraft or explosion), injury or death to a responder or member of the public, investigation into cause and origin, or in connection with anticipated or pending litigation.
- The decision to record and subsequently retain any visual data captured in public space or in and around public property or domains will be balanced against the competing but equally important public concern for transparency. The department will consult with the County Attorney prior to retention of any data.
- UAS-recorded data will not be collected, disseminated or retained solely for the purpose of monitoring activities protected by the U.S. Constitution, such as the First Amendment's protections of religion, speech, press, assembly, and redress of grievances (e.g., protests, demonstrations).
- Collection, use, dissemination, or retention of UAS-recorded data should not be based solely on individual characteristics (e.g., race, ethnicity, national origin, sexual orientation, gender identity, religion, age, or gender), which is a violation of the law.
- Records Sharing
 - Visual information will be captured to transmit "live" footage to the Incident Commander or command post. Viewing such live footage may occur during exigent circumstances where an incident demands or impacts the resources or responsibilities of other entities such as law enforcement,

public agencies, utility providers or political bodies. During these “Unified Command” scenarios, non-department personnel may have **visual** access to images captured by a department UAS **but only** for the purpose of providing critical information in “real time” necessary to guide decision-making and increasing “situational awareness.”

- The department will not freely surrender any footage captured via a UAS to any other governmental or non-governmental agency except in special circumstances, such as where doing so: Is necessary to carry out a fire, rescue, disaster, or other public safety mission; is for the purposes of a mutual-aid mission; is required under any laws governing the disclosure of government records; or is required pursuant to a duty issued court order.
- It is the intent of the department by policy and practice, to protect the privacy interests of members of the public or other “non-department personnel.”

12. Privacy Considerations

- Personnel operating an UAS shall be mindful of privacy rights and absent a warrant or exigent circumstances shall not intentionally record or transmit images in any location where a person would have a reasonable expectation of privacy (e.g., inside house, fenced yard, enclosed area only visible from an elevated position). Operators and observers will take reasonable precautions to avoid inadvertently recording or transmitting images in violation of privacy rights.

13. Prohibited Uses

The UAS shall not be used for the following:

- To conduct random surveillance activities;
- To target a person based solely on individual characteristics, such as, but not limited to race, ethnicity, national origin, religion, disability, gender or sexual orientation;
- To harass, intimidate or discriminate against any individual or group;
- To conduct personal business of any type.

14. Accident Reporting

- Any accident involving a UAS will have a county Incident Report attached to the initial complaint record.
- As required by law, the accident report will be forwarded to appropriate local, state and federal agencies.

15. UAS Maintenance

- All repairs and maintenance will be performed in accordance with manufacturer’s recommendations or by a qualified manufacturer.
- Records of repairs will be maintained for the life of the aircraft for any work performed on the aircraft.

16. Public Notification and Complaints

- This UAS policy will be made available to the public on the department’s website.

- Any complaints received from the community will be handled in accordance with county policy. The department will prepare an incident report for any received complaint which will be filed with that mission specific paperwork (see UAS Privacy Complaint form).

17. Annual Reports

- The department will develop an annual report which describes the:
 - the number of flights, broken down by type of mission as well as daytime versus nighttime;
 - the total time the UAS was used for all flights (emergent, non-emergent, training);
 - additional UAS expenses to operate the program;
 - the number of flights which resulted in the collection of data which was retained and the use which was made of that data.

18. Policy Review

- This policy will be reviewed every 3 years or as changes are made which would impact the drone program.



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