



Bozeman Fire Department Standard Operating Policies and Procedures

Title: Unmanned Aerial Systems	Effective Date: April 2023
Policy Number: 601.07	Page: 1 of 6
Section: Special Operations	
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PURPOSE

This policy is to provide guidance to officers of the Bozeman Fire Department (BFD) in the use of Unmanned Aerial Systems (UAS).

DEFINITIONS

- **Digital Multimedia Evidence (DME):** Digital recordings of images, sounds, and associated data.
- **Remote Pilot In Command (RPIC):** A person exercising control over a Unmanned Aerial System
- **Unmanned Aerial Systems (UAS):** An aircraft intended to navigate in the air without an on-board pilot. Also alternatively called Remotely Piloted Aircraft (RPA), Remotely Operated Vehicle (ROV) or Drone.
- **Visual Observer (VO):** A person assigned to assist with the safe operation of the UAS.

PROCEDURES

A. UNMANNED AERIAL SYSTEMS TEAM

The Bozeman Fire Department (BFD) may utilize UAS to support other elements of the BFD and other emergency services agencies, by providing safe and efficient aerial observation perspective on fires, hazardous materials events, and other emergency public safety incidents and deployments as described herein. UAS deployments will be accomplished efficiently and safely while respecting the law and the privacy of the community.

B. PILOT QUALIFICATIONS AND SELECTION

Pilots in the UAS Program must have one (1) year of service with the BFD. Pilots on the team will be selected by a process approved by BFD Administration. Once selected, pilots must acquire and/or maintain a valid FAA Remote Pilot/UAS Certificate before serving as RPIC of any departmental aircraft.

A Program Coordinator appointed by the Fire Chief will be selected to oversee the UAS Program. Their duties will include the following:

1. Ensuring that policies and procedures conform to current laws, regulations, and privacy guidelines.
2. Establishing a training standard for operators that meets FAA requirements.
3. Overseeing the selection and training of operators.
4. Maintaining and updating the Certificate of Authorization (COA) with the FAA.
5. Overseeing procurement and maintenance of UAS equipment
6. Review of UAS deployments to ensure compliance with policies and operating procedures.
7. Conducting audits of flights logs semiannually.
8. Reporting required information to the FAA as required
9. Oversee annual training for all UAS program personnel on the policies and procedures governing the use of the equipment.



10. Generate an annual report on program activities for submission to the Fire Chief.

C. SUSPENSION and/or REMOVAL

Pilots may be suspended or removed from the program for any the following:

1. Failing to maintain a valid Remote Pilot/UAS Certificate.
2. Failing to comply with policy, laws, or case law applicable to UAS operation.
3. Reckless or unsafe maneuvers or operation of the aircraft.
4. Other disciplinary actions taken by Fire Administration

D. TRAINING

All pilots must maintain proficiency as a RPIC as determined by the Operations Chief. Each pilot must perform at least one training flight or UAS deployment per month to maintain proficiency with each aircraft utilized by the team and any related equipment.

E. EQUIPMENT

UAS Pilots, during departmental UAS deployments, will only use aircraft platforms and equipment approved by the Operations Chief.

F. DEPLOYMENTS

Approval from a Battalion Chief or Chief Officer is needed prior to UAS deployments. UAS operations will be in accordance with FAA regulations, FAA Certificates of Authorization (COA), and any FAA waivers. This can include but is not limited to proper notification to and monitoring of Air Traffic Control if operations are within controlled air space.

Deployments can include, but are not limited to:

1. Search and rescue operations.
2. Fireground operations, both structural and wildland events.
3. Major motor vehicle crashes operations, fires, hazardous materials deployments, fire investigations and documentation thereof.
4. Requests to support other agencies.
5. Public relations or photo flights of fire personnel/operations.

G. MUTUAL AID REQUESTS

Requests for UAS operations outside of Gallatin County require the approval of a BFD Chief Officer.

Mutual aid requests from other agencies within Gallatin County require permission from the Battalion Chief.

Should more than one request for UAS assistance occur at the same time, the requests will be prioritized as follows:

1. Emergency situations with a threat to life within the host agency's response area
2. Emergency situations with a threat to life outside the host agency's response area
3. Requests for UAS deployment with no life threat within the host agency's response area
4. Requests for UAS deployment with no life threat outside the host agency's response area
5. Other requests which do not have a time sensitive nature, such as public relations or damage assessments.

H. LIMITATIONS AND PROHIBITIONS

1. UAS units will not be utilized for traffic enforcement or any direct surveillance of an individual or group of people
2. Personal use of a department UAS is **prohibited**. Unless specifically authorized by a Chief Officer of the department, the use of a personal UAS for a deployment or training is also **prohibited**.



3. The UAS may not be equipped with weapons of any kind.

I. OPERATIONS

1. The RPIC is directly responsible for and is the final authority over the operation of the UAS. RPICs have absolute authority to reject a UAS deployment based on weather, aircraft limitations, physical condition, etc.
2. Due to the nature of fire department UAS deployments, the minimum crew on fire department UAS deployments will be a pilot and a VO. It is preferable the VO is a UAS pilot; however, the RPIC may designate a VO who is not a pilot. It is the responsibility of the RPIC to brief the VO prior to any UAS operation. Requests for drone deployments made to assist police operations/investigations or search and rescue events may not necessitate the use of a VO.
3. The VO will assist the pilot in maintaining visual awareness of the airspace and advise the pilot of any imminent hazards including other aircraft, terrain, power lines, trees, structures, and/or adverse weather conditions. The VO shall handle radio communications between the UAS team and ground units/dispatch. The VO shall remain alert for suspicious persons or activities on the ground and coordinate response by ground units.
4. The following will be completed for every flight, but are not limited to the items or order listed:
 - a. Preflight inspection and resolution of any noted deficiencies.
 - b. Weather briefing.
 - c. Identification of a landing/take off zone.
 - d. Crew briefing and assignments.
 - e. Post flight inspection and associated duties (equipment stowage, battery charging, etc.).
 - f. Required documentation (Pilot log books, airframe log books, evidence processing, etc.).
5. Flight documentation shall be audited by the UAS Program Coordinator monthly. This audit shall include, at minimum, a summary of the following:
 - a. number of missions/uses,
 - i. reason for uses,
 - ii. safety concerns,
 - iii. equipment concerns,
 - b. flight time, to include a review of flight logs or data from flight time counters.
 - c. The results of the audit shall be documented and submitted to the Fire Chief or his designee for review.
 - d. The host agency will publish an annual report documenting the use of UAS. This report will be a public document and shared with the community.
6. When feasible, a public notification should be conducted to advise the public of the fact that:
 - a. A fire UAS is in operation.
 - b. The general location of the UAS operation.
 - c. The purpose of the UAS deployment (i.e. missing person, fire, hazardous materials response, Special Response situation, etc.).
 - d. Other safety information for the public at large (such as to not attempt to view the drone and remain indoors with the doors locked in the case of a hazardous materials release).
 - e. Such notifications should not delay the UAS deployment but be used in conjunction with the deployment. At a minimum, a sign will be prominently displayed near the area of operation indicating that the UAS is in operation.
7. Emergency Procedures
 - a. Emergency procedures stated in the manufacturer's operations manual shall be complied with for all UAS operations. In the event of an emergency involving the safety of persons or property that



RPIC may deviate from the procedures of this directive relating to the aircraft equipment and weather minimums to the extent required to meet the emergency.

- b. Lost Link - An interruption or loss of command and control with the UAS such that the remote pilot can no longer manage the aircraft flight and as a result, the UAS is not operating in predictably or planned manner.
 - i. In this case, the RPIC will ensure the landing zone is cleared for autonomous UAS return and notify the incident commander of link failure.
 - c. Loss of Visual Contact – The aircraft is not immediately visible to the RPIC or VO.
 - i. In this case, the RPIC shall command the aircraft to hover and the RPIC or VO shall try to reestablish visual contact.
 - d. Loss of UAS power - Engine failure of the aircraft in such a way that the aircraft will not be able to maintain flight.
 - i. In this case, flight team members will immediately attempt to locate the aircraft assessed the scene for injuries and render first aid as necessary.
 - e. Flight Termination - The intentional or deliberate process of leveling controlled flight into terrain when all other contingencies have been exhausted.
 - i. In this case, flight termination must be initiated, if further flight of the aircraft cannot be safely achieved or other potential hazards exist that required immediate discontinuation of the flight.
8. Accidents involving a UAS will be reported in accordance with FAA requirements and city policy. In the event of an accident causing bodily injury, the aircraft crew will be responsible for providing first aid, scene security, and notification to the Battalion Chief. It is the responsibility of the RPIC for the documentation of the incident.
9. Complaint Investigations
- a. Should there be a complaint alleging inappropriate use of the sUAS, the complaint shall be handled in accordance with the host agency’s protocols for internal investigations.
 - b. Any complaint alleging a violation of a person’s civil rights by use of the UAS shall be documented and be investigated through the host agency’s Office of Professional Standards.

J. DATA COLLECTION AND STORAGE

In order to safeguard personal privacy of citizens, collection of DME will be limited to the extent necessary for the related investigation and pursuant to the Privacy Protections of this Policy.

Evidentiary data will be provided to the case agent of the agency associated with the flight. Any recorded data taken during a fire department operation and intended to be maintained for investigation, shall be handled in accordance with Bozeman Fire Department and City of Bozeman policies, procedures, and protocols. DME not meeting the above criteria will be destroyed through electronic deletion within 10 days of conclusion of the flight.

- 1. Retention
 - a. Data collected through authorized sUAS missions will be retained in accordance with local state, and federal guidelines and privacy laws as it pertains to the type of data collected and for what purpose(s) the data was collected.
 - i. The department that owns the data that has been collected is responsible for ensuring that reasonable standards for data collection, retention and security are in place and in compliance



- with local, state and federal laws
- ii. Any data collected that does not have local, state or federal retention requirements will be maintained for five (5) years or until the owner of the data determines it is no longer of value and may be destroyed;
 - iii. Any data collected that may contain Personally Identifiable Information (PII) shall not be retained for more than 180 days unless retention of the information is deemed necessary to an authorized mission conducted by the retaining department, is maintained in a records system that follows the Privacy Act or is required by law to be retained for a longer period by any other applicable law or regulation.
- b. Dissemination: The host agency owns the data they collect from the sUAS missions. Any information that is collected, and not retained in a records system covered by the Privacy Act, shall not be shared outside of the department unless required by law or for an authorized department purposes that comply with departmental rules. By publishing this data or otherwise releasing it to the public or another organization, departments do not transfer data ownership but instead grant permission for others to utilize and redistribute the data as necessary.

K. AUDITING

An authorized supervisor or administrator shall audit flight documentation at regular intervals. The results of the audit will be documented. Any changes to the flight time counter will be documented.

L. PRIVACY PROTECTIONS

This program will operate in accordance with the standards set in the Presidential Memorandum: Promoting Economic Competitiveness while safeguarding Privacy, Civil Rights, and Civil Liberties in domestic use of Unmanned Aircraft Systems.

- a. Civil Rights and Liberties Protections: To protect civil rights and civil liberties, the host agency agrees to and commits to abide by the following:
 - i. UAS-recorded data will not be collected, disseminated, or retained solely for 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)
 - ii. Collection, use, dissemination, or retention of sUAS-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;
 - iii. Any reasonable concerns and/or complaints that are expressed concerning the host agency's usage of the sUAS will be investigated, and addressed, as appropriate and by the proper authorities, to ensure compliance with local, state and federal privacy, civil rights, and civil liberties laws.
 - iv. Ensure that UAS activities are performed in a manner consistent with the Constitution and applicable laws, Executive Orders, and other Presidential directives; and
 - v. Ensure that adequate procedures are in place to receive, investigate, and address, as appropriate,



privacy, civil rights, and civil liberties complaints.

- b. Accountability. To provide for effective oversight, the host agency shall:
 - i. Ensure that oversight procedures for agencies' UAS use, including audits or assessments, comply with existing agency policies and regulations;
 - ii. Verify the existence of rules of conduct and training for personnel and contractors who work on UAS programs, and procedures for reporting suspected cases of misuse or abuse of UAS technologies;
 - iii. Establish policies and procedures, or confirm that policies and procedures are in place, that provide meaningful oversight of individuals who have access to sensitive information (including any PII) collected using UAS;
 - iv. Ensure that any data-sharing agreements or policies, data use policies, and record management policies applicable to UAS conform to applicable laws, regulations, and policies; and
 - v. Establish policies and procedures, or confirm that policies and procedures are in place, to authorize the use of UAS in response to a request for UAS assistance in support of Federal, State, local, tribal, or territorial government operations.

M. TRANSPARENCY

The fire department shall make available to the public, on an annual basis, a general summary of the agency's UAS operations during the previous fiscal year, to include a brief description of types or categories of missions flown, and the number of times the agency provided assistance to other agencies, or to State, local, tribal, or territorial governments.

RESPONSIBILITIES

- This policy shall be reviewed at least every two years by Fire Department administration for compliance with federal, state, and local laws.
- All members shall be responsible for knowledge of this SOP.
- The Operations Chief shall be responsible for the selection and training of approved operators.
- The Operations Chief shall ensure compliance with all data collection and storage requirements as well as auditing of all flight documentation.

RECENSIONS

February 2021, April 2022