F12

HIAWATHA FIRE-RESCUE

MEMORANDUM

TO: HONORABLE MAYOR, HIAWATHA CITY COUNCIL

FROM: MIKE NESSLAGE, FIRE CHIEF

SUBJECT: ESTABLISHMENT OF UNMANNED AERIAL SYSTEM (DRONE) PROGRAM

DATE: 11/2/2018

The fire department has been working on the development of an Unmanned Aerial System (UAS) program. UAS is commonly known as a drone. For nearly a year we have been researching requirements and programs. We are now asking your approval to have a UAS program.

The purpose of establishing a UAS program is to enhance the City and Department's missions through knowledgeable use of the latest UAS technologies. These activities will be done in an expeditious and safe manner in adherence to FAA regulations in accordance with all applicable Federal, State, and Local laws. All operations will be conducted in a manner to maximize individual privacy and safety. There are numerous uses that fall within the fire departments mission, protecting lives through locating lost victims; protecting property through pre-plans and response, and protecting the environment by locating hazardous materials leaks as examples. Chief Marks has been involved in discussions regarding the program. The program will be available for the police department as needed, but the administration and oversight will stay within the fire department. The program is also available to other City Departments, with the approval of the City Administrator. Regardless, all operations will be conducted with the utmost regard for personal privacy and, when used for law enforcement purposes, will be done in accordance with existing law and policies.

You are familiar with Dan Veerhusen who writes our grants. Dan also took the lead on this project. To our good fortune, Dan is retired from Collins, where he worked in FAA compliance, and he is also a licensed private pilot. Dan attended a seminar in Des Moines earlier this year on UAS and obtained part 107 (UAS pilot) certification. You can tell from our attached SOP that he put significant thought into the development. Kim Downs, Mark Parmenter, Dennis Marks, and Cindy Kudrna have all been involved in the process. In addition, the policy has been sent off to our insurance carrier and they provided guidance. We believe it is a well thought out procedure.

After your approval we will begin training. Prices for quality units range from $2000 to $12,000 or more. We will be purchasing a system toward the lower end of that range to begin training, prior to investing in a more expensive unit. We hope to use donation money to fund most of the program.

Please contact me if you have any questions. Dan won't be able to attend the meeting with me Wednesday, if you have technical questions regarding the program, please email me ahead of time.

Policy TBD
Unmanned Aerial System Policy
05/23/2018

Purpose:

The purpose of this policy is to establish operational requirements for the use of an Unmanned Aerial System (UAS) by the Hiawatha Fire Department (HFD). This will specify requirements for crew training, UAS maintenance, acceptable mission profiles, data retention and usage of the HFD UAS by other City of Hiawatha departments. In all cases, the usage of the HFD UAS must provide a benefit to the citizens of Hiawatha and/or our mutual aid partners.

Scope:

Per Policy 100, Code of Conduct.

Acronyms;

CFR	Code of Federal Regulations
DFO	Director of Flight Operations
FAA	Federal Aviation Administration
HFD	Hiawatha Fire Department
HPD	Hiawatha Police Department
GPS	Global Positioning System
MT	Maintenance Technician
NIMS	National Incident Management System
NM	Nautical Mile
NOTAM	Notice to Airmen
PIC	Pilot In Command
PIT	Pilot In Training
TFR	Temporary Flight Restriction
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
VFR	Visual Flight Rules
VO	Visual Observer
WX	Weather

Background:

The advent of UAS technology provides an additional tool for HFD to use in the support of our mission. Appropriate UAS operation offers HFD, the City of Hiawatha and our mutual aid partners an efficient tool to aid in the command and control of various operations. HFD will also seek to assist other city departments in their mission through the usage of the UAS. Potential uses for the UAS by HFD include fire ground command and control, search and rescue operations and fire prevention preplanning activities. Other city departments may benefit from the HFD UAS in activities such as law enforcement activities, parade observations, water leak identification and related activities.

The HFD Unmanned Aerial Vehicle (UAV) will weigh less than 55 pounds, including payload, at takeoff. The following general restrictions will apply to the usage of the UAS. Items marked with an * may be allowed pending approval of the Federal Aviation Administration (FAA).

- Operation will be in Class G airspace *
- The UAV will remain in sight of the operator *
- The UAV will operate at or below 400 feet above the ground
- The UAV will operate only during daylight hours *
- The UAV will yield right of way to manned aircraft
- The UAV will not fly over people *
- The UAV will not be operated from a moving vehicle *
- Data retention of electronic images obtained by the UAV will be handled per existing City policies.

Policy:

It is the policy of the Hiawatha Fire Department to enhance the city's missions through knowledgeable use of the latest UAS technologies. These activities are to be done in an expeditious and safe manner in adherence to FAA regulations in accordance with all applicable Federal, State, and Local laws. All UAS operations will comply with the appropriate National Incident Management System (NIMS) structure and will have a clearly assigned Incident Commander who authorizes the UAS utilization. All operations will be conducted in a manner to maximize individual privacy and safety.

A. Oversight
   1. Oversight of the HFD UAS is provided by the Fire Chief.
   2. The Fire Chief is responsible for the budgetary aspects of the UAS.

B. Personnel
   The following personnel assignments are utilized to support the operation of the UAS.
   1. Director of Flight Operations (DFO)
      The DFO will be have the responsibility for all UAS activities performed by HFD.
      a. The DFO shall hold a valid FAA part 107 Remote Pilot Certificate.
      b. The DFO shall hold at least one of the following (14CFR61.23(c), 14CFR107.17):
         1) A current FAA airman medical certificate.
         2) A valid U.S. Driver's License.
      c. The DFO will be a member in good standing of the Hiawatha Fire Department.
      d. The DFO will be assigned by and report to the HFD Fire Chief.
      e. The DFO will be responsible for the creation, implementation and maintenance of all UAS policies.
      f. The DFO will be the primary contact between HFD and the FAA.

g. The DFO will be the primary contact between HFD and the UAS supplier or manufacturer.
h. The DFO will provide monthly reports to the Fire Chief on UAS usage. Reports are described in section I.
i. The DFO is responsible for coordinating maintenance activities for the department's UAS. This includes:
   1) Coordinating firmware updates to the UAS and supporting equipment. Equipment requiring firmware updates include but are not limited to the UAS itself, cameras, flight batteries, stabilization systems, dedicated smart devices (tablets, smartphones), and remote controllers.
   2) Evaluation of software updates and determining update schedule, if needed.
   3) Scheduling of any calibrations needed such as inertial measurement unit, compass, camera gimbal, and remote controller.
   4) Scheduling any other maintenance activities outlined by the manufacturers operation manual for the UAS and supporting equipment.

2. Pilot In Command (PIC)
   The PIC is directly responsible for and is the final authority as to the operation of the UAS. (14CFR107.19(b))
   a. The PIC will be a member in good standing of the Hiawatha Fire Department.
   b. The PIC shall hold a valid FAA part 107 Remote Pilot Certificate.
   c. The PIC shall hold at least one of the following (14CFR61.23(c), 14CFR107.17):
      1) A current FAA airman medical certificate.
      2) A valid U.S. Driver's License.
   d. The PIC shall maintain an understanding of FAA regulations applicable to the airspace where UAS operations will occur.
   e. The PIC shall understand and comply with all HFD UAS policies.
3. Visual Observer (VO)
   The VO assists the PIC and the person manipulating the controls to see and avoid other air traffic or objects aloft or on the ground.
   a. The VO will be:
      1) A member in good standing of the Hiawatha Fire Department
      or
      2) A member in good standing of the Hiawatha Police Department (HPD)
      or
      3) A VO qualified by an organization with a valid UAS Mutual Aid agreement.
   b. Visual Observers must have sufficient knowledge of the airspace to permit them to adequately assess the risks posed by other aircraft or objects.
   c. Visual Observers must have knowledge of basic Visual Flight Rules (VFR) weather minimums.

d. Visual Observers must maintain an understanding of all operational aspects of the UAS.
e. Visual Observers must be familiar with the requirements for Part 107 operations and this policy.

4. Maintenance Technician (MT)
   The MT is responsible for the repair, maintenance and servicing of the UAS.
   a. No person other than the MT may make modifications to the UAS.
   b. The MT will be:
      1) A member in good standing of the Hiawatha Fire Department
      or
      2) A MT qualified by an organization with a valid UAS Mutual Aid agreement.
      or
      3) An authorized representative of the UAS supplier.
5. Pilot In Training (PIT)
   The PIT role provides a means for training additional staff for the PIC role. The PIT may be the manipulator of the UAS controls while under the supervision of a PIC.
   a. Prerequisite Requirements
      1) The PIT shall maintain an understanding of FAA regulations applicable to the airspace where UAS operations will occur.
      2) The PIT shall understand and comply with all HFD UAS policies.
   b. The PIT shall operate the UAS controls and obtain their initial flight experience through training flights while under the supervision of an active HFD PIC.
   c. The PIT may operate the UAS controls while under the supervision of a HFD PIC during non-training flights only after completing:
      1) A minimum of 4 training flights of at least 5 minutes each
      and
      2) A minimum of 10 take offs and landings
6. Documentation of Ratings
   a. The DFO will maintain records of the training received by each PIC, VO and MT.
   b. The DFO will maintain a listing of HFD and HPD personnel who are qualified as a PIC, VO or MT.
      1) The listing shall include the ratings for each PIC. Ratings shall include:
         a) Maximum wind capability
         b) Day or night capability
         c) Specific UAS capability
         d) Mutual Aid capability
      2) The listing shall be signed and dated by the DFO.
      3) A copy of the listing shall be included with each UAS package.

C. Equipment
   1. All UAVs utilized by HFD shall be registered with the FAA. (14CFR107.13)
   2. All UAVs will be permanently marked with the FAA issued registration number prior to flight.
   3. A listing of all HFD UAVs will be maintained by the DFO. The listing shall include the following information:
      a. Manufacturer
      b. Model number
      c. Serial Number
      d. FAA Registration Number
      e. Capability description

D. Maintenance
   1. All servicing of the UAS must follow the manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the UAS and UAS components.
   2. Each UAS must comply with all applicable manufacturer safety bulletins.
   3. The name of the Maintenance Technician performing the work must be listed on all UAS maintenance documents. The Maintenance Technician must be familiar with all aspects of the UAS operation and be able to effectively troubleshoot and solve issues related to all flight components of the UAS.
   4. Any UAS that has undergone maintenance or alteration that affects the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations.
   5. All maintenance performed on a UAS shall be documented and recorded in a Maintenance Log.
      a. A Maintenance Log is applicable to a specific UAS, e.g. each UAS shall have its own Maintenance Log.
      b. The Maintenance Log entry shall include any malfunctions encountered, parts removed, parts replaced, and whether the aircraft is airworthy after any maintenance procedure.
      c. The Maintenance Log shall also be used to record Out of Service information pending repair.
   6. Out of Service Indication
      a. Any UAS component that is in a unflightworthy condition is to be tagged as Out of Service.
      b. Operation of a UAS with an Out of Service indication is prohibited.
      c. The Out of Service tag is to include the following information:
         1) Brief description of problem;
         2) Signature of person making report;
            and
         3) Date of report.

E. Operations
   1. System Readiness
      Usage of a UAS in an emergency situation is most likely an unscheduled activity. As such, every effort is to be made to make sure that the UAS is in a ready state following each mission.
      a. Following each mission, the UAS is to be stored in a ready state.
         1) All UAS batteries are to be charged or in their charging unit.
         2) All equipment specified in UAS Equipment Checklist is to be present.
         3) All UAS equipment is to be cleaned, inspected and flightworthy.
         4) Maintenance Log is to be updated as needed.
   2. Minimum Crew
      a. The minimum crew configuration for a UAS flight consists of:
         1) One Pilot In Command
         2) One Visual Observer
      b. For flights supporting an organization with a UAS Mutual Aid agreement, an approved Visual Observer for that organization may replace the HFD Visual Observer.
      c. For flights supporting organizations without a UAS Mutual Aid agreement, that organization's representative may assist the HFD Visual Observer.
   3. Flight Planning
      Each flight requires a planning stage. While the depth of the planning may vary depending on the application (life safety event vs. training exercise), each flight will have a planning activity. Items to be covered during the Flight Planning stage include:
      a. Weather
         1) Surface wind forecast;
         2) Winds aloft forecast;
            and
         3) Visibility
      b. Airspace Status
         1) Controlled Airspace locations;
         2) Airport locations;
         3) Notice to Airman (NOTAM);
            and
         4) Temporary Flight Restrictions (TFRs)
      c. UAS Status
      d. Site Information
         1) Location;
         2) Primary launch and recovery area;
         3) Secondary launch and recovery area;
         4) Abort area
            a) The Abort area is defined as a clear location that is declared as a controlled crash area should a normal landing not be possible.

5) Hazard Identification; and
6) No-Fly area identification

4. Mission Description
   a. A mission description is to be provided for each mission by the Incident Commander or requesting agency.
   b. The mission description shall include:
      1) The goal for the mission;
      2) Any time constraints;
      3) Identification of any known hazards; and
      4) Points of contact and communication method.
5. Operational Envelope
   The operational envelope for the UAS consists of identifying the capabilities of the UAS in the context of the mission and weather conditions. For example, the operational envelope for a mission requiring a large payload on a windy day will be much different than the envelope for a light payload on a calm day.
   a. Mission Duration
      1) The mission duration will be planned based on the weather conditions, payload and battery state.
      2) A five minute battery reserve will be planned into the mission.
   b. Mission Altitude
      1) The mission altitude shall be no higher than 400 feet above ground or within 400 feet of an existing structure. (14CFR107.51(b))
      2) The mission altitude shall be such that the UAS does not fly within
         a) 500 feet below the clouds (14CFR107.51(d)(1))
         b) 2,000 feet horizontally from the clouds. (14CFR107.51(d)(2))
   c. Mission Visibility
      1) The minimum visibility from the control station must be at least 3 statute miles. (14CFR107.51(c))
   d. Mission Winds
      Winds at the mission site impact both the performance of the UAS and the PICs ability to control the UAS.
      1) In no case shall the mission result in a UAS ground speed of greater than 100 miles per hour. (14CFR107.51(a))
      2) Missions in excess of the PIC's rating are not allowed unless specifically approved by the DFO.
         a) The DFO is expected to balance the risks associated with the winds against the mission criticality.
6. UAS Inspection
   a. The UAS shall be inspected prior to each flight using the checklist provided.

b. The PIC is responsible for assuring that the UAS is in an airworthy state prior to each flight.

7. Safety of Flight
   a. The Pilot In Command is responsible for halting or canceling flight operations if, at any time, the safety of persons or property on the ground or in the air is in jeopardy.
   b. The Pilot In Command is responsible:
      1) To maintain visual contact with the UAV directly or by the use of Visual Observers.
      2) To maintain verbal and/or radio contact with the Visual Observer(s).
      3) To remain clear of and give way to all manned aviation operations and activities. The PIC will ensure that there is a safe operating distance between aviation activities and the UAS.
      4) For the safety of persons or property on the surface with respect to the UAS
      5) For compliance with 14CFR91.111, 91.113 and 91.115.
   c. Visual Observers:
      1) Must be able to see the UAV and the assigned surrounding airspace throughout the entire flight.
      2) Must be able to clearly communicate any instructions to the PIC that are required for the UAS to remain clear of conflicting traffic.
      3) Are to provide the PIC with the UAS flight path, proximity to all aviation activities and other hazards (e.g., terrain, weather, structures) sufficiently for the PIC to exercise effective control of the UAS to prevent the UAS from creating a collision hazard.
8. Operational Restrictions
   a. Operation of the UAS is not allowed within (14CFR107.43)
      1) 5 nautical miles (NM) from an airport having an operational control tower.
      2) 3 NM from an airport having a published instrument flight procedure, but not having an operational control tower.
      3) 2 NM from an airport not having a published instrument flight procedure or an operational control tower.
      4) 2 NM from a heliport
   b. UASs must be operated during daytime hours.
   c. UAS operation is preferred to occur over public streets, city property or utility easements.
   d. Operations conducted over private property shall be conducted with permission from the property owner or authorized representative. Permission from property owner or authorized representative must be obtained for each flight to be conducted.
      1) This requirement may be waived in the case of life safety events, search and rescue operations, working fires, and support of HPD in accident investigations, pursuits, apprehensions and search warrant

activities.

e. UASs may not be operated from any moving device or vehicle.
f. UASs must remain clear of and give way to all manned aviation operations at all times.
   1) UAS operations will be grounded when air ambulances such as Lifeguard are responding to the scene and are within 2 NM of the UAS.
   2) UAS operation may continue when air ambulances are staged near the incident scene when coordinated with the PIC and the air ambulance pilot.

9. Lost Links
   a. If the UAS loses communications or loses its GPS signal, the UAV must return to a pre-determined landing location and land.
   b. If control of the UAV is lost during operations, the flight team must notify Air Traffic Control with a UAV heading and last known location (lat/long).
   c. The flight team must also make every attempt to safely recover the UAV.
   d. The PIC shall document the Lost Link event in a written report to the DFO. The report shall include:
      1) Date and time of event;
      2) PIC name;
      3) Description of outage including length of outage;
      4) Summary of any issues or incidents as a result of the outage; and
      5) Description of any safety related issues as a result of the outage.
   e. In an emergency situation involving the safety of persons or property, which requires immediate decisions and actions, the PIC or any other appropriate Flight Personnel member may take action that is considered necessary under the circumstances to ensure safety. Flight personnel may deviate from prescribed operations procedures, to the extent necessary to address the emergency. Flight Personnel shall keep the appropriate ATC facilities fully informed when an in-flight UAS emergency could potentially impact operations of aircraft in airspace other than Class G.
10. System Failures
   a. System failures shall be documented in the UAS Maintenance Log.
   b. Any system failures which result in a safety of flight issue are to be documented and reported to the DFO in writing by the PIC. The report shall include:
      1) Date and time of event;
      2) PIC name;
      3) Description of event; and
      4) Description of any damage or injuries as a result of the event
11. Emergencies:

a. In the event that a safe landing is unlikely, the UAV shall be directed to the Abort area.
b. Utilization of the Abort area or an unplanned landing location shall be documented in writing by the PIC and reported to the DFO. The report shall include:
   1) Date and time of landing;
   2) PIC ;
   3) Reason for landing;
      and
   4) Damage report

12. Documentation
    a. All necessary documentation must be kept with the PIC during Flight Operations, including:
       1) Manufacturer's manuals;
       2) This Policy;
       3) UAS Registration Form;
       4) Copy of any FAA Waivers ;
          and
       5) The Mission Planning form (appendix A).
    b. The PIC shall complete the Flight Summary Form (Appendix D) at the completion of each flight. The Flight Summary Form shall be submitted to the DFO within 24 hours of the flight.
13. Use of Personal UAS
    a. Use of personally owned UAS in the support of HFD operations is not allowed.

F. Intracity Operations

The Fire Department will provide UAS resources to other city departments on a time available basis. The DFO has the authority to reject any request that are viewed to be out of scope for the UAS or Fire Department.

1. Hiawatha Police Department (HPD)
   a. Public safety requests from HPD are viewed as a high priority request.
   b. A UAS Public Safety Flight Request form (Appendix B) shall be submitted to the DFO prior to the requested flight.
      1) The completed Public Safety Flight Request form shall be approved by the Chief of Police or designated representative.
   c. HPD personnel are eligible to be trained as Visual Observers.
   d. Data files created during operations for HPD will be the property of HPD and will be controlled, archived and released according to HPD policies.
2. Other City of Hiawatha Departments
   a. Usage requests for the HFD drone received from other City of Hiawatha departments (e.g. Building Department, Water Department, City Administration) will be handled on an as available basis.

b. A UAS Flight Request form (Appendix C) shall be submitted to the DFO prior to the requested flight.
   1) The completed UAS Flight Request form is to be approved by the City Administrator or designated representative.
c. Requests should be submitted at least 3 days in advance, however, the Fire Department will strive to accommodate short notice flights when possible.
d. Data files created during operations for other city departments will be the property of those departments and will be controlled, archived and released according to City of Hiawatha policies.

G. Mutual Aid Operations
HFD encourages the use of a UAS Mutual Aid agreement with our neighboring departments. The intent of the UAS Mutual Aid agreement is to establish the chain of command and expectations for delivery of UAS services prior to an emergency event.
1. Operations with a Mutual Aid UAS agreement
   Pre-incident planning and coordination of the use of UAS is encouraged.
   a. All flight operations utilizing Mutual Aid agencies will be conducted under the direction of the Incident Commander.
      1) HFD flight operations will not be conducted at an incident without first being requested by the Incident Commander.
   b. Receiving Mutual Aid
      1) Visual Observers qualified by other agencies may be used in support of HFD operations as specified in the UAS Mutual Aid agreement.
   c. Giving Mutual Aid
      1) The usage of Visual Observers qualified by other agencies is encouraged to support of HFD mutual aid operations as specified in the UAS Mutual Aid agreement.
      2) The usage of VOs familiar with the local environment is encouraged.
2. Operations without a Mutual Aid UAS agreement
   HFD recognizes that situations may occur where UAS resources may be useful to other agencies in which HFD does not have a UAS Mutual Aid agreement.
   a. Usage of the HFD UAS to support agencies without a UAS Mutual Aid agreement are to be approved by the DFO.
   b. All flight operations performed to assist agencies without a UAS Mutual Aid agreement will be conducted under the direction of the Incident Commander.
      1) HFD flight operations will not be conducted at an incident without first being requested by the Incident Commander.
   c. Ultimate control of the UAS is the responsibility of the PIC. This includes Go/No Go mission decisions.

H. Training

1. Pilot In Command Initial Training
   a. The PIC shall complete training to satisfy the requirements of 14CFR107 Subpart C.
   b. The PIC shall have a valid FAA part 107 Remote Pilot Certificate.
   c. The PIC shall have reviewed this policy.
   d. The PIC shall have received training on the HFD UAS including:
      1) A minimum of 6 flights of at least 5 minutes each as the sole manipulator of the UAS controls under the supervision of an active HFD PIC.
      2) A minimum of 10 take offs and landings under the supervision of an active HFD PIC.
2. Pilot In Command Recurrent Training
   a. The PIC shall complete the required FAA biannual training to maintain a valid FAA part 107 Remote Pilot Certificate.
   b. The PIC shall have completed a minimum of two flights of at least 5 minutes each as PIC in the preceding 90 days.
   c. The PIC shall have completed a minimum of 10 takeoffs and landings within the preceding 90 days.
   d. The PIC shall have attended a minimum of two HFD UAS training sessions within the preceding 90 days.
3. Visual Observer Initial Training
   a. VOs shall complete the HFD Visual Observer training program.
   b. VOs shall have reviewed this policy.
   c. VOs shall have participated in a minimum of three training flights of at least 5 minutes each under the supervision of an active VO.
4. Visual Observer Recurrent Training
   a. Visual Observers shall have completed a minimum of two flights of at least 5 minutes each as a VO within the previous 90 days.
   b. The VO shall have attended a minimum of two HFD UAS training sessions within the preceding 90 days.
      1) VOs who are HPD members shall receive their recurrent training sessions as part of a quarterly HPD training activity.
5. Maintenance Technician Initial Training
   a. The MT shall become familiar with the manufacture's maintenance instructions for the HFD UAVs.
   b. The MT shall complete a UAV orientation session.
   c. The MT shall have assisted in the set-up, launch, recovery and post-flight activities on three UAS deployments or training flights.
   d. These requirements do not apply to an authorized representative of the UAS supplier.
6. Maintenance Technician Recurrent Training
   a. The MT shall have attended a minimum of two HFD UAS training sessions within the preceding 90 days.

b. The MT shall be up to date on all UAS service bulletins and maintenance updates.
c. These requirements do not apply to an authorized representative of the UAS supplier.

7. Reinstatement after a Training Lapse
   a. PIC, VO or MT staff are not allowed to serve in those roles if they have not completed their recurrent training within the last 90 days.
   b. PIC, VO, or MT who have lapsed may participate in training flights to complete the recurrent training.
   c. The DFO will review the lapsed PIC, VO or MT recurrent training and restore the PIC, VO or MT to active status if applicable.
8. Training Flights
   a. Training flights may be performed for the purpose of gaining experience for either the PIC, VO, MT, intracity departments or mutual aid partners.
   b. Training flights may only be conducted during designated training sessions, as approved on the Flight Request Form (Appendix B or C).
   c. A pilot may operate a UAS under this Section for training purposes even if he or she does not meet the requirements for acting as a PIC.
      1) A HFD PIC must be present and serve as the HFD PIC for these training flights.
   d. All training flights must be terminated immediately if any person or vehicle not involved in the training approaches within 500 feet (calculated as actual distance) of the UAS.
   e. In all other respects, training flights must be conducted in accordance with the requirements of this policy.

I. Documentation
The DFO shall provide monthly reports to the Fire Chief. These reports are to include:
1. Listing of the HFD UAS fleet including:
   a. Operational status and capabilities
2. Staffing Summary
   a. Number of active PIC;
   b. Number of active VO;
   c. Number of active MT;
   d. Number of PIC in training;
   e. Number of VO in training; and
   f. Number of MT in training
3. Summary of missions flown
4. Summary of training flights

5. Summary of any Lost Links, System Failures or In-Flight Emergencies.
6. Summary of any non-standard maintenance actions
7. Summary of any accidents or incidents
   a. The DFO will also provide the FAA with an accident report as needed per 14CFR107.9.

J. Data Retention and Release
   1. All electronic data collected via UAS operation is the property of the City of Hiawatha.
   2. Dissemination of UAS electronic data is controlled by City of Hiawatha policy.
   3. Any electronic data obtained as part of a mission for the Hiawatha Police Department will be retained and released by the Police Department per City Policy.
   4. Requests for UAS data are to be made per City of Hiawatha policy.

Appendix A, Mission Planning Form

Mission Number	Date/Time
Location	Sunrise/Sunset
IC/phone	PIC/phone
VO/phone	VO/phome
DFO/phone	
Primary Comm	Secondary Comm
Mission Objective	Estimated Mission Duration
Mission Details	
UAS Requirements	
UAV	
WX	

	Wind	Visibility	Ceiling
Current			
Forecast			

Primary Launch & Recovery Site
Secondary Launch & Recovery Site
Abort Area
No Fly Area(s)
Airspace Class
Airports
NOTAMs
TFRs

Appendix B, Public Safety Flight Request Form

Requested Date & Time	Alternate Date & Time
Location	What are the weather constraints?
Primary Point of Contact Name Phone Email	Secondary Point of Contact Name Phone Email
Mission Objective	Estimated Mission Duration
Requested Support Equipment Video Thermal	
Mission Details	
Is this a training or orientation mission?	Is this a confidential mission?
Other information	
Police Chief or Fire Chief Approval	

Appendix C, Flight Request Form

Requested Date & Time	Alternate Date & Time
Location	What are the weather constraints?
Primary Point of Contact Name Phone Email	Secondary Point of Contact Name Phone Email
Mission Objective	Estimated Mission Duration
Mission Details	
Is this a training or orientation mission?	Requested Support Equipment Video Thermal
Other information	
City Administrator Approval	

Appendix D, Flight Summary Form

Mission Number	Date/Time
PIC	Flight Time
VO	Flight Time
VO	Flight Time
VO	Flight Time
Issues?	
Maintenance Items?	
Stored By	Ready For Flight

DRAFT

RESOLUTION NO. 18-
City Council

RESOLUTION APPROVING AN UNMANNED AERIAL SYSTEM (UAS) DRONE PROGRAM

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HIAWATHA, IOWA, to approve an Unmanned Aerial System (UAS) Drone Program to enhance the City of Hiawatha and Hiawatha Fire Department's missions through knowledgeable use of the latest UAS technologies, as shown in the attached Exhibit "A."

AYES:
NAYS:
ABSENT:

PASSED AND APPROVED this 7th day of November, 2018.

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Bill Bennett, Mayor

ATTEST:

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Kelly Kornegor, City Clerk