



CITY OF KIRKLAND
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MEMORANDUM

To: Kurt Triplett, City Manager

From: Joe Sanford, Fire Chief
Cherie Harris, Police Chief
Julie Underwood, Public Works Director
Kevin Raymond, City Attorney
Heidi Brown, Legal Intern

Date: May 31, 2021

Subject: PUBLIC SAFETY UNMANNED AERIAL SYSTEMS TEST PROGRAM PROPOSAL

RECOMMENDATION:

It is recommended that the City Council receive a briefing on establishing a one-year Public Safety Unmanned Aerial System ("UAS") test program for the City of Kirkland ("City"). During the one-year testing period, this drone program would be utilized by three departments: Fire, Police, and Public Works. Staff is seeking Council feedback on the test drone program and a resolution formally approving the test program could be brought back to Council at its next regular meeting.

BACKGROUND DISCUSSION:

The Council approved development of a one-year test UAS program to improve public safety as part of the 2019-2020 budget. Due in part to the COVID-19 pandemic, development of the test program was delayed, but the Council's \$55,000 budget appropriation was carried over to 2021-2022. Since then, staff from the Fire, Police, and Public Works Departments, together with the City Attorney's Office, have been researching the feasibility of a test drone program and developing draft administrative policies to support its successful implementation.

The use of UAS drones in emergency response, public safety, and utilities monitoring contexts has become increasingly common. Emergency management organizations across the country are using UAS platforms to conduct damage assessments over large incident areas. Fire departments are implementing the use of UAS systems for hazard assessment and situational awareness during events, and the use of drones to locate missing persons during search and rescue operations has become a regularly used and helpful tool. Police departments are utilizing UAS systems to enhance community safety by providing safe, non-threatening, active incident observation capabilities in tactical situations that enhance safety, for example by creating greater physical distances between police officers and suspects during critical incidents.

UAS platforms are adaptable to meet multiple needs and can be shared by multiple departments. For example, they can utilize different optical systems, such as video and infrared, and be paired with existing information-gathering tools in some instances. As just one example, a drone can be paired with a police department's traffic investigation equipment, improving the

efficiency of the mapping and documentation of a serious collision and minimizing the amount of time a roadway might remain closed after the collision. The Washington State Patrol has deployed more than 75 UAS systems in the state, reportedly reducing the time needed to conduct on-site collision investigations by forty percent.

Staff has completed extensive research into federal and state laws, best practices and operational standards, and the regular use of drones by nearby agencies. The resulting draft policies, attached hereto as Exhibit A, incorporate guidance from the Federal Aviation Administration, the Washington Civil Liberties Union, and the National Fire Protection Association.

A City-wide administrative policy has been drafted that would govern all City uses under the pilot program, including with respect to privacy and public records and retention issues. Separate administrative policies have been developed for Fire, Police, and Public Works, each of which are consistent with and governed by the City-wide policy. Among other things, the policies make is clear that: 1) City drones will not be used for surveillance purposes; 2) facial recognition software will not be used; 3) drones will not be weaponized; and 4) privacy rights will be respected.

What follows is a summary of the draft policies attached hereto.

City-wide policy (Attachment 1)

The purpose of this policy is to establish the base requirements and guidelines for any UAS operated by a City employee, with a focus on safety, community benefits, and privacy considerations. In drafting this policy, staff referenced federal and state laws, FAA regulations and guidelines, and recommendations from civil rights organizations and other key stakeholders.

Under this policy, authorized uses include, but are not limited to, pre-emergency mitigation, such as monitoring landslide areas; ice monitoring; structural inspections; and community outreach. Function-specific uses are described in the department sections below.

Prohibited uses include random surveillance activities; targeting individuals based on immutable characteristics such as race; harassment, intimidation, or discrimination; and conducting personal business. Certain technologies are prohibited by this policy as well; for example, City drones may not be equipped with facial recognition technology or weapons.

This policy also covers logistics such as equipment considerations; how staff can become authorized to use the UAS; how video footage captured by the UAS is handled; records retention and reporting; and how the policy would be updated in the future.

Fire (Attachment 2)

This policy details the program logistics and primary uses for the Fire Department.

Examples of authorized uses for this department include, but are not limited to, searching for missing individuals; providing situational awareness to support fire ground operations; and aiding in water rescues.

Logistically, this policy covers procedures specific to the Fire Department, such as the department-specific chain of command.

Police (Attachment 3)

This policy details the program logistics and primary uses for the Police Department.

Examples of authorized uses for this department include, but are not limited to, criminal emergencies, such as a hostage situation; high-risk search warrants; and traffic and crime scene mapping.

Logistically, this policy covers procedures specific to the Police Department, such as the department-specific chain of command and adherence to additional laws covering law enforcement agencies, particularly regarding search warrants.

Public Works (Attachment 4)

This policy details the program logistics and primary uses for the Public Works Department.

Examples of authorized uses for this department include, but are not limited to, water tower inspections; flooding inspections; traffic flow monitoring; beaver activity monitoring; and inspections after geological issues, such as a landslide.

Logistically, this policy covers procedures specific to Public Works, such as the department-specific chain of command.

Funding approved by the City Council in the 2019-2020 service package (\$55,000, including \$30,000 ongoing and \$25,000 one-time) would support the purchase of one small training drone and one medium sized operational drone, as well as the required training and certification for UAS pilots and spotters. City staff trainings would meet the requirements of applicable federal Laws, FAA requirements, and Washington Administrative Code and National Fire Protection Agency provisions, and staff would be required to complete the necessary FAA Part 107 Waiver and Certificate of Authorization steps. Typical pilot training involves about 8 hours of on-line sessions and about 20 hours of in-person sessions, and department representatives would be trained as UAS pilots and spotters, and where appropriate they would also be cross-trained on polices and mission parameters to help ensure pilot and spotter availability.

The following chart depicts the estimated budget to begin the one-year test program:

ITEM	ONE-TIME	ON-GOING	
Training Drone	\$ 1,100		
Operational Drone	\$ 22,000		
Operational supplies		\$ 3,000	
FFA Courses		\$ 6,000	
Drone Training Course		\$ 10,000	

If approved, and following the proposed one-year UAS testing period, City staff would report back to the Council with results from the City's use of drones over that period, together with any recommendations related to a possible continuation and/or changes to the program.

- Attachment 1 – City-wide Policy
- Attachment 2 – Fire Policy
- Attachment 3 – Police Policy
- Attachment 4 – Public Works Policy

City of Kirkland
Unmanned Aircraft System Policy

Purpose and Scope

The purpose of this general policy is to establish guidelines for City of Kirkland (City) use of an Unmanned Aircraft System (UAS), including any data collected as a result of using the UAS. Department policies may be more detailed and specific in specific instances, but they shall in all events be consistent with this general policy.

Definitions¹

1. Small unmanned aircraft system (small UAS)
 - a. A small unmanned aircraft [under 55 pounds] and its associated elements (including communication links and the components that control the small unmanned aircraft) that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.
2. Unmanned Aircraft (UA)
 - a. An aircraft operated without the possibility of direct human intervention from within or on the aircraft.
3. Pilot in Command (PIC)
 - a. Pilot in command means the person who:
 - (1) Has final authority and responsibility for the operation and safety of the flight;
 - (2) Has been designated as pilot in command before or during the flight; and
 - (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.
4. Visual Observer (VO)
 - a. A person who is designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the small UAS to see and avoid other air traffic or objects aloft or on the ground.
5. Certificate of Waiver or Authorization (COA)
 - a. An authorization issued by the Air Traffic Organization to a public operator for a specific UA activity.

¹ Definitions from 14 CFR § 1.1, 14 CFR § 107.3, and faa.gov.

6. Blanket COA

- a. Allows an agency to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and operator, and in daylight only.

Policy

The UAS will be used to increase safety and efficiency, both for the public and for City personnel. All UAS operations will be conducted in strict accordance with the U.S. Constitution, the Washington State Constitution, and FAA regulations. This policy will govern an initial pilot program that will last approximately one year, with the goal of determining whether the City would benefit from a long-term UAS program. The initial pilot program will be funded through a 2019-2020 Service Package provided to the Fire Department but available for initial use by Fire, Police, and Public Works. The UAS will be available for emergency deployment 24 hours a day by these departments while assigned for all general purposes to the Fire Department Battalion Chief.

Privacy and Safety Considerations for UAS Operation

Operators of the UAS will consider potential privacy and safety concerns during each step of the operation and will make adjustments accordingly.

Before flight

Prior to each flight, the remote Pilot in Command (PIC) will consider any potential privacy issues or safety concerns. While Remote Pilots need not write down each foreseeable potential privacy issue or safety hazard, he or she will keep them in mind when operating the UAS. Further, they will be able to articulate these potential concerns to the Program Coordinator if requested, either before or after the flight. Additionally, the Remote Pilot may decline to use the UAS in a given situation based on privacy or safety concerns.

During flight

During each flight, the PIC will take care to help prevent and avoid any privacy issues or safety risks. Such in-flight precautions may include, but are not limited to, angling cameras away from certain areas, turning off certain technology capabilities, or calling off the flight entirely. A Visual Observer will assist the Remote Pilot with these in-flight precautions.

The Remote Pilot will adhere to FAA safety regulations. Further, the PIC will not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy, except in circumstances where a) there is an active emergency; or b) a high-risk warrant is being served.

After flight

All flights will be recorded in a Flight Log, which will be made available to the public on a monthly basis by the Program Coordinator. Publishing the Flight Log on the City website

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will help provide transparency to the public by allowing concerned citizens to check if a particular UA was operated by the City. If a citizen is concerned that there may have been a privacy or safety issue, then they may request UAS footage from the City per the Public Disclosure Act.

If a privacy issue or safety violation occurs, the Remote Pilot's actions will be reviewed by the Program Coordinator. If the Program Coordinator determines that the violation was either unlawfully intentional or due to negligence, then the Remote Pilot may be required to undergo further training and/or may be removed from flight duties.

Privacy and Safety Considerations for UAS Equipment

Privacy

The City is taking privacy concerns seriously in choosing UAS equipment. The City's goal is to use the UAS in a manner that does not violate the privacy rights of others. For example, the City's intent is not to use the UAS for surveillance purposes except when providing support for risk assessment investigation at incidents or events. The City will demonstrate its commitment to privacy protection in part by refraining from equipping any UAS with facial recognition technology. No facial recognition technology will be added to any City-owned or operated unmanned aircraft.

Safety

The City is also taking safety concerns seriously in choosing UAS equipment. Regarding safety, the City will limit the UAS technology when necessary to improve public safety or provide community outreach materials. As a specific example, the City will never purchase or use any unmanned aircraft that are equipped with weapons.

Further, the purpose of the UAS is to increase situational awareness, which will improve safety. A few examples of how the UAS equipment can be used by the City to improve safety include the following:

- If a person is missing, a UAS can be used to quickly scan over large areas that would otherwise take a search party a substantial amount of time to comb through. Having an overhead perspective is particularly useful in fields and bodies of water. For example, if a boat is overturned on Lake Washington, the UAS thermal imaging camera can be used to quickly determine whether there is a person in the surrounding waters. A person's body temperature is contrasted with the water's temperature, so a person's outline becomes clearly visible on the UAS.
- If the police are serving a high-risk warrant, the unmanned aircraft can be used to help quickly locate a suspect. This reduces the risk to the suspect because police can quickly determine the threat level and location, which means they can use appropriate methods to apprehend the suspect with greater confidence. Additionally, the use of UAS reduces the risk to the officers because they know precisely what they're dealing with and the location of the suspect. Further, the use of the UAS reduces the risk to public bystanders because the police can immediately see if the suspect attempts to flee into a public space and adjust their response accordingly.

Authorized Uses

The primary goal when using the UAS is to increase both safety and efficiency. During the test program period, the UAS will be used to support Fire, Police and Public Works operations. All uses aside from the authorized uses below (such as assisting outside jurisdictions/agencies) of the UAS must be authorized in advance by a Department Director or their designee and be otherwise consistent with this policy. A Remote Pilot has the option to decline using the UAS in any given situation.

Examples of authorized uses may include, but are not limited to, the following:

- Water tower inspections
- Inspection after landslide, earthquake, or other geological issue
- Traffic flow monitoring at specific intersections/locations
- Beaver activity monitoring; dam/den locations, water flow and inundation
- Traffic collision scene mapping
- Crime scene mapping
- Search and rescue
- Fire monitoring
- Ice monitoring
- Pre-emergency mitigation, such as monitoring landslide areas
- Structural inspections (e.g. after a seismic event)
- Criminal emergencies, such as a hostage situation, a fleeing felon, or an armed suspect
- High-risk search warrants
- HAZMAT situations
- Community outreach
- Training

Prohibited Uses

The UAS will not be used for the following:

- To conduct surveillance activities except when providing support for risk assessment investigation at incidents or events
- To target a person based solely on individual characteristics such as, but not limited to, race, ethnicity, national origin, religion, disability, gender, sexual orientation, or immigration status
- To harass, intimidate, or discriminate against any individual or group
- To conduct personal business of any type

The City will ensure that the UAS is not used in any prohibited way by 1) restricting authorized operators to only those who have undergone the appropriate training and have received certification; 2) only permitting flights that have been authorized by a Department Director or their designee; 3) holding itself accountable to the public by releasing monthly Flight Logs; and 4) limiting the technological capabilities of the UAS.

Authorized Operators

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The UAS will be operated only by personnel who have been trained and certified in the operation of the system and who are FAA Certified Remote Pilots. Remote Pilots may be sourced from the Fire, Police, and Public Works Departments for allowable uses.

Program Coordinator

The UAS Program will be overseen by a Program Coordinator within the Fire Department, who will be selected through a joint effort between Fire, Police, and Public Works. The Program Coordinator's duties will include the following:

- Working with project leads in other Departments participating in this program
- Ensuring that policies and procedures conform to current laws, regulations, and best practices
- Establishing a training standard for operators that meets FAA requirements
- Overseeing the selection and training of operators
- Ensuring that all Remote Pilots possess a Remote Pilot Certificate
- Obtaining, maintaining, and updating the COA with the FAA
- Overseeing procurement and maintenance of UAS equipment
- Authorizing UAS flights
- Reviewing UAS deployments to ensure compliance with policies and operating procedures
- Reviewing Flight Logs monthly

Flight Logs

All flights conducted with the UAS will be logged in a Flight Log, which will include such information as the purpose of the flight, date and time, weather (METAR & TAF), duration, and flight area. The purpose of the Flight Log is to promote transparency to the public and to help evaluate the efficacy of the program.

Remote Pilots will update the Flight Log in the City server's "H: drive" within 72 hours of a flight. The Flight Log will be posted on a monthly basis on the City of Kirkland website. The UAS Program Coordinator will review the Flight Log prior to it being posted.

Data retention

Data collected by the UAS will be retained in accordance with Washington State Records Retention Schedules and made available to requestors as required by the Washington Public Records Act, chapter 42.56 RCW (PRA).

By way of example, UAS video recordings made by the Police Department that do not capture an incident will be retained in accordance with state retention schedules for 90 days from the date of recording, after which the recordings may be destroyed. For UAS Police Department video recordings that do capture an incident, the recordings will be retained until the matter is resolved and the appeals process has been exhausted, after which the recordings may be destroyed. The Police Department will comply with the PRA and Kirkland Police Department Policy 804 (Records Maintenance and Release) regarding public records disclosure requests in all instances.

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By way of further example, UAS video recordings made by the Fire Department that is used in a fire investigation will be retained in accordance state retention schedules, the PRA and Kirkland Fire Department Policy 713.

In the absence of a PRA or other legally binding request or demand, the Remote Pilot may review and edit photographs and video recordings to trim down unnecessary images/footage captured.

Updates to this policy

The City will consult with community groups pursuant to Resolution 5434 prior to making any substantive changes to this policy. "Substantive change" here means a modification to a clause in this policy which would affect the City's use of the UAS. For example, altering the data retention schedule based on updated guidance from the State of Washington would not constitute a substantive change, but deleting a clause from the "Prohibited Uses" section would constitute a substantive change.

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Unmanned Aircraft Systems

713.1 PURPOSE AND SCOPE

The purpose of this policy is to establish guidelines for the use of an unmanned aerial system (UAS), subject to the provisions of the City of Kirkland (City) Unmanned Aircraft System Policy.

Define guidelines and requirements for safe operations of the UAS in support of Kirkland Fire Department (KFD) operations under FAA Part 107 and KFD obtained Part 107 waivers.

Establish that KFD and the City have a responsibility to not infringe on the rights or property of the citizens of Washington State.

Provide for the storage, retrieval and dissemination of images and data captured by the UAS.

Public Safety UAS shall be shared use equipment with Kirkland Police Department (KPD) or Public Works Department (PW).

713.2 DEFINITIONS¹

1. Small unmanned aircraft system (small UAS)
 - a. A small unmanned aircraft [under 55 pounds] and its associated elements (including communication links and the components that control the small unmanned aircraft) that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.
2. Unmanned Aircraft (UA)
 - a. An aircraft operated without the possibility of direct human intervention from within or on the aircraft.
3. Pilot in Command (PIC)
 - a. Pilot in command means the person who:
 - (1) Has final authority and responsibility for the operation and safety of the flight;
 - (2) Has been designated as pilot in command before or during the flight; and
 - (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.
4. Visual Observer
 - a. A person who is designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the small UAS to see and avoid other air traffic or objects aloft or on the ground.
5. Certificate of Waiver or Authorization (COA)
 - a. An authorization issued by the Air Traffic Organization to a public operator for a specific UA activity.
6. Blanket COA

¹ Definitions from 14 CFR § 1.1, 14 CFR § 107.3, and faa.gov.

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- a. Allows an agency to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and operator, and in daylight only.

713.3 POLICY

It shall be the mission of qualified and trained KFD personnel to use this resource to protect lives and property of the citizens within the jurisdiction of KFD.

Operations shall always be conducted in a constitutionally and legally sound manner and in compliance with Federal Aviation Administration (FAA) regulations. The UAS shall be utilized to protect/save life and property and detect possible dangers.

UAS shall support first responders in the following operations:

- Trail, still/swift water and technical rescue operations
- As an airborne platform for monitoring fire/wildland operations
- Search for lost/missing individuals
- Provide operational and situational awareness to support fire ground operations
- Aid with disaster assessment and recovery operations
- Support of HAZMAT and other specialty operations
- When requested by an Incident Commander
- Fire Investigations
- Training events
- Target hazards/pre-plans
- Crowd management

713.4 PROGRAM MANAGEMENT

The UAS program will be managed and administered by a Program Coordinator within KFD chosen jointly by KDF, KPD and PW. The Program Coordinator will report to the Deputy Chief of Administration and interact with program leads within Police and PW. The Program Coordinator shall:

- Evaluate policies and procedures for conformance with current laws, regulations and best practices and will have the following additional responsibilities:
- Coordinate the FAA Certificate of Waiver or Authorization (COA) application process
- Maintain current COA for department utilizing the UAS program
- Verify all authorized operators and required observers have completed all required FAA and department-approved training in the operation, applicable laws, policies and procedures regarding use of the UAS.
- Implement a system for public notification of UAS deployment.
- Recommend program enhancements, particularly regarding safety and information security.

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713.5 PROCEDURES

UAS and operating equipment will be stored within and transported on Battalion 121.

Only authorized operators who have completed the required training shall be permitted to operate the UAS.

Daily and weekly operational checks shall be completed per the manufacturer's recommendations. Primary flight operations will normally occur in KFD's jurisdiction/service area.

At no time will deployment of a UAS compromise operational capabilities or firefighter safety.

All flights to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and operator, and in daylight only.

All flights shall be conducted within FAA Part 107 guidelines as well as under the terms of the Agency's Blanket COA.

Deployment of UAS assets and personnel for incident response shall be requested by an On-Duty Battalion Chief or Incident Commander.

The IC shall be responsible for providing the mission parameters to UAS operators.

If the Mission PIC determines that the use of the UAS would violate department policy or directives, the PIC shall inform the on-scene BC, Incident Commander or Senior Officer of the potential conflict along with recommendations for modifying the requested mission to conform to the department policies and procedures.

PIC are responsible for verifying mission parameters meet UAS operational criteria.

Operational considerations are:

- Proposed use of the UAS is within the capabilities of the UAS equipment and personnel
- Use of the UAS falls within the FAA regulations and City and Department policies
- UAS can be deployed safely given current situational and weather conditions
- Night operations flight conditions shall align with "Flying at Night" FAA UAS Guidelines
- Are sufficient trained and qualified personnel available to safely operate the UAS

Deployment of a UAS shall consist of, at a minimum, one PIC and one VO.

KFD operated UAV are not normally available for automatic or mutual aid deployments. Exceptions shall be approved by the Fire Chief or their designee.

All flights, operational checks and maintenance shall be logged by the PIC in the flight log.

713.5.1 PROHIBITED USE OF UAS

Personally-owned UAS shall not be used for City or Department deployments.

In addition to the Prohibited Uses set forth in the City's general policy (City of

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Kirkland: Unmanned Aircraft System Policy), KFD UAS shall not be weaponized and facial recognition software shall not be used.

Kirkland Fire Department UAS shall not be utilized to:

- At any time that would violate FAR Part 107, issued COA, this policy, or any other FAA regulation.
- Conduct random surveillance activities.
- Target a person based solely on individual characteristics, such as, but not limited to race, ethnicity, national origin, religion, disability, gender, sexual orientation, or immigration status.
- Harass, intimidate or discriminate against any individual or group.
- Conduct personal business of any type.

713.5.2 TRAINING

UAS Operators shall complete a KFD- approved course. Training programs shall include, as a minimum, the following components:

- FAA Ground School/Flight course
- Manufacturer recommendations for use, care and maintenance of UAS
- City and Department Policy on use of unmanned aircraft systems
- Operations test for UAS/piloting skills

713.6 DATA STORAGE

Any data, information, photographs, video or recordings of individuals, both in public and private, should be minimized and retained in a manner consistent with current privacy standards. All such data shall be maintained in accordance with State of Washington Retention Schedules and the requirements of the Washington Public Records Act, chapter 42.56 RCW.

Data shall be stored and catalogued by KFD incident number.

The Incident Commander of an emergency scene where drone(s) are deployed, shall be responsible for confirming digital media and imagery including video, pictures and thermal imaging collected during missions, are downloaded to the Agency server for reference and records retention.

Digital/imagery data will be downloaded within twenty- four (24) hours of the end of the mission(s).

713.7 DOCUMENTATION

The care, maintenance and use of UAS shall be documented in flight logs.

All flights, training or deployments shall be documented in UAS flight logs.

713.7.1 INCIDENT DOCUMENTATION

Use of UAS shall be documented as part of the incident report narrative.

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The requesting IC shall document their request and considerations for the use of UAS.

The PIC shall document use, flight profile and findings as part of the narrative.

713.7.2 FLIGHT DOCUMENTATION

PIC shall be responsible for all flight documentation.

Flight documenting shall include:

- Mission/purpose
- Identify PIC and VO
- Specify Incident or training
- Duration of flight

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Unmanned Aerial System (UAS) Operations

613.1 PURPOSE AND SCOPE

The purpose of this policy is to establish guidelines for the use of an unmanned aerial system (UAS) and for the storage, retrieval and dissemination of images and data captured by the UAS, subject to the provisions of the City of Kirkland (City) Unmanned Aircraft System Policy.

613.1 .1 DEFINITIONS¹

1. Small unmanned aircraft system (small UAS)
 - a. A small unmanned aircraft [under 55 pounds] and its associated elements (including communication links and the components that control the small unmanned aircraft) that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.
2. Unmanned Aircraft (UA)
 - a. An aircraft operated without the possibility of direct human intervention from within or on the aircraft.
3. Pilot in Command (PIC)
 - a. Pilot in command means the person who:
 - (1) Has final authority and responsibility for the operation and safety of the flight;
 - (2) Has been designated as pilot in command before or during the flight; and
 - (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.
4. Visual Observer
 - a. A person who is designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the small UAS to see and avoid other air traffic or objects aloft or on the ground.
5. Certificate of Waiver or Authorization (COA)
 - a. An authorization issued by the Air Traffic Organization to a public operator for a specific UA activity.
6. Blanket COA
 - a. Allows an agency to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and operator, and in daylight only.

¹ Definitions from 14 CFR § 1.1, 14 CFR § 107.3, and faa.gov.

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613.2 POLICY

Unmanned aerial systems may be utilized to enhance the department's mission of protecting lives and property when other means and resources are not available or are less effective. Any use of a UAS will be in strict accordance with constitutional and privacy rights and Federal Aviation Administration (FAA) regulations.

613.3 PRIVACY

The use of the UAS potentially involves privacy considerations. Absent a warrant or exigent circumstances, operators and observers shall adhere to FAA altitude regulations and shall not intentionally record or transmit images of any location where a person would have a reasonable expectation of privacy (e.g., residence, yard, enclosure). Operators and observers shall take reasonable precautions to avoid inadvertently recording or transmitting images of areas where there is a reasonable expectation of privacy. Reasonable precautions can include, for example, deactivating or turning imaging devices away from such areas or persons during UAS operations. Facial recognition software shall not be used.

613.4 PROGRAM COORDINATOR

A Program Coordinator within the Fire Department will be appointed jointly by the Fire, Police and Public Works Departments, and shall be responsible for the management and administration of the UAS program. The Program Coordinator will coordinate with a project lead within Police to help ensure that policies and procedures conform to current laws, regulations and best practices and will have the following additional responsibilities:

- Coordinating the FAA Certificate of Waiver or Authorization (COA) application process and ensuring that the COA is current.
- Ensuring that all authorized operators and required observers have completed all required FAA and department-approved training in the operation, applicable laws, policies and procedures regarding use of the UAS.
- Developing uniform protocol for submission and evaluation of requests to deploy a UAS, including urgent requests made during ongoing or emerging incidents. Deployment of a UAS shall require written authorization of the Chief of Police or the authorized designee, depending on the type of mission.
- Developing protocol for conducting criminal investigations involving a UAS, including documentation of time spent monitoring a subject.
- Implementing a system for public notification of UAS deployment.
- Developing an operational protocol governing the deployment and operation of a UAS including, but not limited to, safety oversight, use of visual observers, establishment of lost link procedures and secure communication with air traffic control facilities.
- Developing a protocol for fully documenting all missions.
- Developing a UAS inspection, maintenance and record-keeping protocol to ensure continuing airworthiness of a UAS, up to and including its overhaul or life limits.
- Developing protocols to ensure that all data intended to be used as evidence are accessed, maintained, stored and retrieved in a manner that ensures its integrity as evidence, including strict adherence to chain of custody requirements. Electronic trails,

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including encryption, authenticity certificates and date and time stamping, shall be used as appropriate to preserve individual rights and to ensure the authenticity and maintenance of a secure evidentiary chain of custody.

- Developing protocols that ensure retention and purge periods are maintained in accordance with established records retention schedules.
- Facilitating law enforcement access to images and data captured by the UAS.
- Recommending program enhancements, particularly regarding safety and information security.
- Ensuring that established protocols are followed by monitoring and providing periodic reports on the program to the Chief of Police.

613.5 USE OF UAS

Only authorized operators who have completed the required training shall be permitted to operate the UAS.

Use of vision enhancement technology (e.g., thermal and other imaging equipment not generally available to the public) is permissible when in compliance with a search warrant or court order or in qualifying exigent circumstances. In all other instances, legal counsel should be consulted.

UAS operations should only be conducted in compliance with City and Department policies, FAA regulations, and the terms of the COA.

613.6 PROHIBITED USES

In addition to the Prohibited Uses set forth in the City's general policy (City of Kirkland: Unmanned Aircraft System Policy), the UAS video surveillance equipment shall not be used:

- 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, sexual orientation, or immigration status.
- To harass, intimidate or discriminate against any individual or group.
- To conduct personal business of any type.

The UAS shall not be weaponized.

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613.7 RETENTION OF UAS DATA

Data collected by the UAS shall be retained as provided in the established records retention schedule. All such data shall be maintained in accordance with State of Washington Retention Schedules and the requirements of the Washington Public Records Act, chapter 42.56 RCW (PRA).

Specifically, UAS video recordings made by the Police Department that do not capture an incident will be retained for 90 days from the date of recording, after which the recordings may be destroyed. For UAS Police Department video recordings that do capture an incident, the recordings will be retained until the matter is resolved and the appeals process has been exhausted, after which the recordings may be destroyed.

The Police Department will comply with the PRA and Kirkland Police Department Policy 804 (Records Maintenance and Release) regarding public records disclosure requests.

Unmanned Aircraft Systems – Department Policy – Public Works Department

PURPOSE AND SCOPE

The purpose of this policy is to establish guidelines for the use of an unmanned aircraft system (UAS) for research, marketing, inspections, or other Public Works (PW) Department requested projects, subject to the provisions of the City of Kirkland (City) Unmanned Aircraft System Policy. UAS can be utilized in circumstances which would save time and enhance data collection, increase project awareness, save life and property, and detect possible dangers and/or liabilities that could not otherwise be seen.

Define guidelines and requirements for safe operations of the UAS in support of Kirkland Public Works (PW) under FAA Part 107 and PW obtained Part 107 waivers.

Establish that PW and the City of Kirkland have a responsibility to not infringe on the rights or property of the citizens of Washington State. It shall be the intent of every PW UAS pilot to make a reasonable effort to not invade a person's reasonable expectation of privacy when operating the UAS.

Provide for the storage, retrieval and dissemination of images and data captured by the UAS.

DEFINITIONS

Small unmanned aircraft system (small UAS)

A small unmanned aircraft [under 55 pounds] and its associated elements (including communication links and the components that control the small unmanned aircraft) that are required for the safe and efficient operation of the small unmanned aircraft in the national airspace system.

Unmanned Aircraft (UA)

An aircraft operated without the possibility of direct human intervention from within or on the aircraft.

Pilot in Command (PIC)

Pilot in command means the person who:

- (1) Has final authority and responsibility for the operation and safety of the flight;
- (2) Has been designated as pilot in command before or during the flight; and
- (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.

Visual Observer (VO)

A person who is designated by the remote pilot in command to assist the remote pilot in command and the person manipulating the flight controls of the small UAS to see and avoid other air traffic or objects aloft or on the ground.

Certificate of Waiver or Authorization (COA)

An authorization issued by the Air Traffic Organization to a public operator (City of Kirkland or City) for a specific UA activity.

ATTACHMENT 4

Blanket COA

Allows an agency to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and PIC, and in daylight only.

POLICY

It shall be the mission of qualified and trained PW personnel to use the UAS resource to document major projects and provide aerial images/videos for the purpose of educating the community on capital improvement projects and to complete varied department inspections.

Operations shall always be conducted in a constitutionally and legally sound manner and in compliance with Federal Aviation Administration (FAA) regulations.

UAS shall support Public Works in the following operations:

- Water, wastewater, and surface water infrastructure inspection in easements which are inaccessible or have limited access
- Inspection after landslide, earthquake, or other geological issue
- Water tower inspections
- Flooding inspections
- Traffic flow monitoring at specific intersections/locations
- Beaver activity monitoring; dam/den locations, water flow and inundation
- Mitigation sites; plant percent coverage, survivorship verification on a more regular basis
- Capital Improvement Program community outreach
- Internal meetings for rapid project updates
- Record of existing conditions for capital improvement program projects

Interdepartmental requests require the authorization of Public Works Director and requesting department Director.

PROGRAM MANAGEMENT

A Program Coordinator within the Fire Department shall be chosen jointly by Fire, Police and Public Works, who will be responsible for the management and administration of the UAS program. A program lead within PW will report to the Deputy Public Works Director. The program lead shall:

- Coordinate with the Program Coordinator within Fire.

Evaluate policies and procedures for conformance with current laws, regulations and best practices and will have the following additional responsibilities:

ATTACHMENT 4

- Coordinate with citywide efforts for COA compliance
- Maintain current COA for Department UAS program
- Verify all authorized PIC and required VO's have completed all required FAA and department-approved training in the operation, applicable laws, policies and procedures regarding use of the UAS.
- Implement a system for public notification of UAS deployment.
- Recommend program enhancements, particularly regarding safety and information security.

PROCEDURES

Only authorized pilots who have completed the required training shall be permitted to operate the UAS.

Daily and weekly operational checks shall be completed per the manufacturer's recommendations.

At no time will deployment of a UAS compromise operational capabilities or PIC safety.

All flights to operate in uncontrolled airspace (Class G), under 400 feet above ground, within line-of-sight between UAS and operator, and in daylight only.

All flights shall be conducted within FAA Part 107 guidelines as well as under the terms of the Agency's Blanket COA, if applicable.

The UAS PIC shall be responsible for providing the mission parameters to Public Works Director, or their designee.

PIC is responsible for verifying mission parameters meet UAS operational criteria. Operational considerations are:

- Proposed use of the UAS is within the capabilities of the UAS equipment and personnel
- Use of the UAS falls within the FAA regulations and City and Department policies
- UAS can be deployed safely given current situational and weather conditions
- Night operations flight conditions shall align with "Flying at Night" FAA UAS Guidelines
- Qualified personnel available to safely operate the UAS
- Deployment of a UAS shall consist of, at a minimum, one PIC. If deemed necessary within the flight parameters, visual observer/s will be utilized in accordance with FAA guidelines.

All flights, operational checks and maintenance shall be logged by the PIC in the flight log.

PROHIBITED USE OF UAS

Personally-owned UAS shall not be used for City or Department deployments. Public Works UAS shall not be weaponized, nor shall it utilize facial recognition software.

ATTACHMENT 4

In addition to the Prohibited Uses set forth in the City's general policy (City of Kirkland: Unmanned Aircraft System Policy), Public Works Department UAS flights shall not:

- Violate Temporary Flight Restrictions, FAA Part 107, issued COA, this policy, or any other FAA regulation.
- Conduct random surveillance activities.
- Target a person based solely on individual characteristics, such as, but not limited to race, ethnicity, national origin, religion, disability, gender, sexual orientation, or immigration status.
- Harass, intimidate or discriminate against any individual or group.
- Conduct personal business of any type.

TRAINING

UAS pilots shall complete department approved training course to obtain a drone pilots license. Training programs shall include, as a minimum, the following components:

- FAA Ground School/Flight other method of obtaining a drone pilot license
- Manufacturer recommendations for use, care and maintenance of UAS
- City and Department Policy on use of unmanned aircraft systems
- Operations test for UAS/piloting skills

DATA STORAGE

Any data, information, photographs, video or recordings of individuals, both in public and private, should be minimized and retained in a manner consistent with current privacy standards. All such data shall be maintained in accordance with State of Washington Retention Schedules and the requirements of the Washington Public Records Act, chapter 42.56 RCW.

Data shall be stored and catalogued by division standards within Public Works.

Digital/imagery data will be downloaded within seventy-two (72) hours of the end of the flight(s).

DOCUMENTATION

The care, maintenance and use of UAS shall be documented in flight logs. All flights, training or deployments shall be documented in UAS flight logs.

PIC shall be responsible for all flight documentation. Flight documenting shall include:

- Flight objective/purpose
- Identify PIC and VO, if applicable
- Time and duration of flight
- Approximate location of flight
- Weather recorded prior to flight, or METAR from Paine Field Airport