

Snohomish County Department of Emergency Management
UNMANNED AERIAL SYSTEM STANDARD OPERATING GUIDELINES

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TITLE

Department of Emergency Management (DEM) Remotely Piloted Aircraft Systems Standard Operating Guidelines (SOG) general guidance.

PURPOSE

This SOG provides guidelines for the Snohomish County Department of Emergency Management on the purchase, registration, and safe, efficient, lawful use of remotely piloted aircraft systems (RPAS). Remotely piloted aircraft systems can be utilized in circumstances that protect life and property, save time, enhance data collection, and detect possible dangers or liabilities that could not otherwise be observed. It is essential that privacy be respected so every remotely piloted aircraft system operator must make a reasonable effort to not invade a person's reasonable expectation of privacy throughout the flight and data operations.

DEFINITIONS:

RPAS (Remotely-Piloted Aircraft System, also known as UAS - Unmanned Aircraft System) — An aircraft and its associated elements required for the safe and efficient use, operated without the possibility of direct human intervention from within or on the aircraft. A RPAS is capable of sustaining directed flight whether preprogrammed or remotely controlled. For the purposes of this document, RPAS for Snohomish County Emergency Management are "small unmanned aircraft" defined by the Federal Aviation Administration (FAA). Unless otherwise specified or authorized, any RPAS utilized will weigh less than 55 pounds on takeoff, including everything on board or otherwise attached to the aircraft in conformance with the legal definition of "small unmanned aircraft."

UAV – Unmanned Aerial Vehicle – the hardware deployed into the air

NAS National airspace system - The airspace, navigation facilities, and airports of the United States along with their associated information, services, rules, regulations, policies, procedures, personnel and equipment.

Remote Pilot – Is a holder of a remote pilot certificate issued by the FAA.

RPAS Operator – Is a person who flies remotely using a wireless controlling device for the RPAS.

Visual Observer – Is a person designated by the Department to assist the RPAS operator in maintaining visual contact and avoiding other air traffic, objects aloft, or hazards on the ground.

Part 107 – Refers to Federal Aviation Regulation Part 107 (from Title 14 Code of Federal Regulations), which governs the operations of UAS/RPAS.

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PERMITTED USES

1. **Incident response and recovery** – includes natural and human-caused disasters such as flood, earthquake, landslide, hazardous contaminations, social unrest, etc.
2. **Incident damage assessment** – incident related damage assessment for disaster declaration and other assistance.
3. **Incident mitigation** – assessment of potential mitigation opportunities ahead of or during an incident.
4. **Infrastructure inspection** – pre/post event safety inspections of building, bridges, travel ways, utilities.
5. **Infrastructure inspection (non-incident related)** – visual inspection of bridges, levees, pipelines, travel ways, risk areas, traffic signals, utilities.
6. **Audible alert system sensor placement/locating/maintenance reconnaissance** - visual review of lahar, dam, Tsunami and other sites for planning and monitoring.
7. **Volumetric measurement** – 3-Dimensional volume measurement of material stockpiles, landslide debris, or spill debris
8. **Project monitoring/documentation** - visual data collection for the support of project goals or supporting project documentation
9. **Site monitoring** – review of construction progress, changes, incidents
10. **Site investigation** – investigation of contamination, leaks, illegal dumping, construction accidents, collision, or major crime scenes.
11. **Mapping/LIDAR data collection** -Light Image Detection and Ranging sensor use for terrain or other 2 or 3-Dimensional mapping
12. **Public Information and Education** – includes outreach communication, support of the JIC during activations
13. **Search and rescue response and support** - visual search support and documentation of hard to access locations

PROHIBITED USES

1. Any flight parameters prohibited by FAA part 107 certification rules are prohibited unless waivers through the FAA have been acquired.
2. **Video or photo data shall not be used** - To conduct random surveillance on citizens, harass or intimidate any individuals or group, conduct personal business of any kind

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PRIVACY

Like the practices and procedures in use by other governmental jurisdictions, absent a warrant or exigent circumstances, operators and observers will:

1. Adhere to FAA altitude rules;
2. Not intentionally record or transmit images, of any location where a person would have a reasonable expectation of privacy (e.g., residence, yard); unless fulfilling a mission objective under the permitted uses.
3. Take reasonable precautions to avoid areas where there is a reasonable expectation of privacy by taking precautions such as deactivation or programming of imaging devices, and/or image reduction during data processing to minimize or avoid such areas and persons that are not material to the purpose for which RPAS is used.

PROGRAM COORDINATION

Program coordination will occur by a designated Chief Pilot. This will ensure that County guidelines maintain conformance with laws, regulations, and best practices. The coordinator will:

- Be responsible for training coordination, certification confirmation, and currency of the RPAS pilots for insurance purposes;
- Develop and maintain local procedures for RPAS operations in the National Airspace System;
- Develop and implement an RPAS maintenance program based on manufacturer recommendations and certified maintenance providers;
- Maintain records relating to RPAS pilot training and aircraft maintenance;
- Ensure that established guidelines are followed by monitoring and providing periodic reports on the program to Snohomish County Department of Emergency Management Leadership;
- Periodically reviews state and local laws, FAA requirements and other regulations and draft updates to guidelines that conform with changes;
- Be responsible for approval of hardware and software purchases;
- Coordinate FAA waivers for special flight requirements as needed.

ADMINISTRATIVE GUIDELINES

1. Upon selection, a RPAS operator will acquire the training and experience needed to obtain an FAA Remote Pilot Certificate. Upon the issuance of FAA Remote Pilot Certificate, the remote pilot must submit a copy of the certificate to the Program Coordinator for record keeping purposes.
2. RPAS flight training or practice will be conducted only directly above Snohomish County property without people below the flight zone. Park spaces or pit sites should be preferred training areas and time of day and day of week considered to minimize conflict with other

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scheduled activities on site. Internal training will include both classroom and in-field instruction on hardware and software specific to Snohomish County operation requirements.

3. Certified RPAS operators will conduct preflight inspections, including specific aircraft and control station system checks, to ensure the RPAS is ready for safe operation. Remote pilots will adhere to laws, rules, protocols and the department policy, but may deviate from these requirements in response to an in-flight emergency. RPAS operators will not operate in a careless or reckless manner. RPAS operators must report to the FAA within 10 days of any operation that results in serious injury, loss of consciousness, or property damage of over \$500 including damage to or total loss of the RPAS itself.
4. Flights will be logged publicly in accordance with Snohomish County Department of Emergency Management RPAS logging standards within 24 hours after takeoff. This log will be available on the Snohomish County Department of Emergency Management website. The date and time of the flight, flight duration, coordinates of the takeoff point, pilot name and permitted use type shall all be recorded and available to view publicly.
5. Imagery or other data gathered using RPAS will be transferred, processed, and stored according to the standard procedures established or allowed by IT and the RPAS coordinator. Spatial data for use within Snohomish County enterprise applications will adhere to established standards of format, metadata, and retention. Data collected using a RPAS shall be retained as prescribed in the established Snohomish County records retention schedule.

APPROVAL SIGNATURE	
DEM Director	Date: December 1, 2020