



CCSF EMPLOYEE DRONE POLICY

Committee on Information Technology

The City and County of San Francisco (“City”) is dedicated to embracing technologies that help improve its services while protecting the privacy and safety of its residents. The use of drones in the public interest is expected to benefit residents and visitors to the City through the more efficient use of City resources.

PURPOSE AND SCOPE

This Drone Policy (“Policy”) is intended to guide officers, employees, and contractors of participating departments with approved drone programs. The term “**drone**” means an unmanned aircraft flown by a pilot via a ground control system, or autonomously through use of an on-board computer, communication links or other any additional equipment.

This Policy is subject to an evaluation period ending in September 2020 and will be brought back to COIT for further consideration. During the evaluation period, a Drone Oversight Committee composed of representatives from the Mayor’s Office, the City Administrator, and COIT will review the drone programs of all participating departments and provide recommendations to COIT on revisions to this Policy, as necessary.

This Policy applies to all departments participating in the City’s drone program, including boards and commissions, employees, contractors, and volunteers. Elected officials, employees, consultants, volunteers, and vendors while working on behalf of the City are required to comply with this Policy.

POLICY STATEMENT

The City’s Drone Policy requires each participating department to adopt a policy that reflects the requirements described in this document. Departments may add requirements to their drone policies, but may not remove any requirement in this document, or use drones for any reason outside the “authorized use cases” identified for each department. All department policies must be approved by COIT staff before any authorized use.

The departmental drone policy must be reviewed and signed by all drone operators in the participating department, and by any individuals with access to drone data that may contain Personally Identifiable Information.

Engaging in the unauthorized use of drones or activities that are inconsistent with this Policy may subject an officer or employee to discipline, up to and including termination of employment or removal from office, as well as to applicable monetary fines and penalties. Nothing in this Policy shall modify or reduce any due process rights provided pursuant to the officer or employee’s collective bargaining agreement.

COIT Policy Dates

Approved: September 19, 2019

Evaluation Period: September 2019 – September 2020

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The authorized use of drones is limited to the following Department use cases.

<i>Department</i>	<i>Authorized Use</i>
Controller's Office	<ul style="list-style-type: none"> – <i>Disaster Response & Recover</i>: Aerial review of areas affected by disasters or emergencies.
Fire Department	<ul style="list-style-type: none"> – <i>Disaster Response</i>: Assessment and District Surveys – <i>Emergency Response</i>: Building Fire Reconnaissance – <i>Search & Rescue</i>: Aerial or water borne drones. – <i>Training</i>: Assessment and evaluation of emergency response operations.
Public Utilities	<ul style="list-style-type: none"> – <i>Construction Management</i>: Inspection of project sites for contract and environmental compliance. – <i>Disaster Response & Recovery</i>: Inspection and initial damage assessment during and after a natural disaster, or other emergency event affecting SFPUC infrastructure or assets. – <i>Environmental Monitoring & Documentation</i>: Inspection of vegetation type and health, wildlife, streams/reservoirs. – <i>Inspections</i>: Surveys and assessments of SFPUC properties and assets. – <i>Marketing and Public Outreach</i>: Capture of video and still images of SFPUC infrastructure and facilities to produce media for education and outreach purposes.
Port	<ul style="list-style-type: none"> – <i>Disaster Response & Recovery</i>: Inspections during and after a disaster. – <i>Inspections</i>: Survey and assessment of Port properties. – <i>Marketing</i>: Capture of video and still photographs.
Public Works	<ul style="list-style-type: none"> – <i>Construction Management</i>: Inspection of projects, documentation of areas of erosion and production of informational materials for progress reports and completed projects. – <i>Disaster Response & Recovery</i>: Capture of aerial views and reconnaissance of affected natural areas, properties, roadways, or assets in the event of a disaster. – <i>Environmental Monitoring</i>: Assessment of the condition and health of City-owned street trees. – <i>Inspections</i>: Survey and inspection of bridges, building exteriors and facades, rooftops, or assets located in difficult to reach areas, including solar panels and roof mounted AC units. – <i>Surveying & Mapping</i>: Public Asset management for all topographic mapping projects, provision of base imagery for topographic data collection, creation of supplemental Digital Elevation Models, support of field work, review of as-built plans, and inspection of inaccessible or hazardous locations.
Recreation & Parks	<ul style="list-style-type: none"> – <i>Construction Management</i>: Inspection of SFRPD project sites for contract and environmental compliance. – <i>Disaster Response & Recovery</i>: Inspection of properties, facilities, and assets during and after disasters. – <i>Emergency Response</i>: Park Rangers rapid response to emergencies on park land. – <i>Environmental Monitoring</i>: Review of flora and fauna type and health, spills and leaks, erosion. – <i>Inspections</i>: Surveys and assessments of SFRPD properties, facilities, and assets. – <i>Mapping</i>: Digital elevation models, land use maps, 3D models, contours. – <i>Marketing</i>: Capture of video and still photographs. – <i>Search & Rescue</i>: Reconnaissance and assistance during an emergency, both for water and land operations.
Technology	<ul style="list-style-type: none"> – <i>Video Production</i>: Capture of video and still photographs as elements of the City video productions program.

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POLICY REQUIREMENTS

The privacy and safety of San Francisco residents, businesses, and visitors are the top priorities of this Policy. Department policies must be consistent with this Policy and must comply with all City, State, and Federal laws and regulations, and with all state and federal Constitutional guarantees. To review Federal Aviation Authority (FAA) requirements for the registration and use of drones by the City, please refer to:

<https://www.faa.gov/uas/>

- Specifications:** Each City drone must have a global positioning system. The software and/or firmware used to operate the drone must be up to date and maintained.
- Safety:** Drones must be operated in a safe manner. City drones should not be operated in a way that causes personal injury or property damage. Drones may not have features (e.g., lights, coloring) or be used in a way that distracts drivers or other aircraft.
- Drones that lose GPS signals should be set to hover in place. Additionally, drones that lose signals to their remote operator or when low power is detected should be set to return to home/origin.
- Training:** Drone operators must obtain remote pilot certifications from the FAA and must comply with all other FAA requirements.
- Notification:** Departments shall notify the public of intended drone operations at the site of operations through signage in readily viewable public areas. In addition, Departments shall notify the public of all drone flights by publishing flight summary data on the Open Data portal at least 24 hours in advance of operations. Department notifications shall include flight summary information and the type of data to be collected (See Appendix B for the City's Flight Summary Form).
- NOTE: Pre-notification is not required when drones are used for emergency authorized uses. In those situations, flight summary information must be submitted within 48 hours after the operation.
- Prohibited Zones:** Drones may not be used within five miles of an airport or in any FAA no-fly zone unless approved by the appropriate authority. City drone operations must comply with FAA rules.
- Drones may not hover over trolley, streetcar, or light rail line wires, above rail, bus and parking control facility yards, unless authorized by the SFMTA.
- Drones are not authorized within 500 feet of historical landmarks without authorization from building management or owners, except in cases where an emergency exists or FAA waiver is provided. San Francisco historical landmarks are defined by Article 10 of San Francisco's Planning Code. (e.g. City Hall, the Ferry Building. A full list is available here: <https://sfplanning.org/preservation>)
- Drones may not fly over Port properties subject to the Maritime Transportation Security Act of 2002 without the permission of the Port and/or terminal operator. Port officials will provide City agencies with a list of regulated maritime facilities.
- Privacy:** Departments must have an authorized purpose to collect information using a drone, or use drone-collected information. Should information be incidentally collected that could be used to identify persons or private information, Departments must remove all personal identifiable information from raw data footage.

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- Data Security:** Departments are strongly encouraged to only live-stream Drone Data and not retain any Drone Data where possible. Departments are advised not to maintain archives of raw, unprocessed Drone Data once the business purpose is accomplished. Departments must restrict access to any raw drone footage it retains to authorized staff. Distribution of raw drone data is restricted to authorized departments for the purpose of cleansing and processing data only. In all other circumstances, the City may not exchange raw, unprocessed drone-collected data between departments or disclose such data to the public except for exigent public safety needs or as required by law.
- Departments may store raw data up to a maximum of one year. Exceptions to this standard must be supported with documentation and a clear rationale, and maintained by department staff to be reviewed by COIT.
- Compliance:** All City drone operators must submit flight information to the Open Data portal here: <https://sfgov1.sharepoint.com/sites/ADM-Drone/SitePages/Home.aspx>
- Contractors:** If entering into a contract with a third party to operate drones, the contract should consider including the following requirements:
- The department shall require the contractor to comply with the department's approved drone policy which shall be attached to the contract and incorporated by reference.
 - Ownership and handling of drone footage - "City Data" includes without limitation all data collected, used, maintained, processed, stored, or generated by or on behalf of the City, including as the result of the use of the services provided by a contractor. The City retains ownership and rights to City Data, including derivative works made from City Data and the licensing applied to the data. Contractors must treat City Data using the same Privacy and Data Security requirements that apply to CCSF employees.
 - Unauthorized use prohibited - Engaging in the unauthorized use of drones or activities that are inconsistent with this Policy may be grounds for termination of the relevant contract, as well as applicable monetary fines and penalties.
 - Data Security – Contractors must identify the application used to remove personal identifiable information that may have incidentally collected during an authorized flight.
 - Insurance required – Contractor drone operators must provide proof of liability insurance commensurate with current SFPUC insurance requirements for contractors.
 - Use Agreement Language - If an Unmanned Aircraft System (UAS) is used for any purpose under this permit either directly by the Contractor or by a subcontractor to the Contractor, the Contractor shall ensure that such activity is covered by Unmanned Aircraft Systems insurance. The Contractor must submit proof of UAS insurance with an aggregate limit of at least \$2,000,000. The certificate of insurance must include a separate policy endorsement showing proof of UAS coverage which at a minimum shall include coverage for damage to person and property. A second (separate) endorsement must be submitted naming the City and County of San Francisco, its officers, agents and employees as Additional Insured for this coverage. NOTE: Each of these two endorsements require a separate attachment to the certificate of insurance.

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ROLES AND RESPONSIBILITIES

1. **Departments** participating in the drone evaluation years are required to adopt a policy that reflects the requirements iterated in this document. The departmental drone policy must be reviewed and signed by all drone operators in participating departments, and any individuals with access to drone data that may contain Personal Identifiable Information.
2. **Drone Advisory Committee** will review and evaluate Department authorized use cases and provide recommendations to COIT on the continued use of drones. The Drone Advisory Committee will be composed of representatives from the Mayor's Office, the City Administrator, and COIT.

DEFINITIONS

Personal Identifiable Information: Information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual.

Drone Data: Information collected by a City drone. The term "raw" Drone Data refers to Drone Data that has not been processed and cleaned of all personal identifiable information. The distribution and use of raw drone data is tightly restricted.

QUESTIONS

All questions regarding this policy should be directed to the employee's supervisor or to the department director. Similarly, questions about other applicable laws governing the use of drones or the issues related to privacy should be directed to the employee's supervisor or the director, although the supervisor or director may determine that the question must be addressed to the COIT. Employees may also contact their unions for advice or information about their rights and responsibilities under these and other laws.

REFERENCE

The FAA has developed regulations on the use of drones. For more information, please refer to their website at: <https://www.faa.gov/uas/>

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Appendix A: DEPARTMENT DRONE PROGRAM AND AUTHORIZED USE

[Participating Departments are required to adopt a policy that reflects the requirements iterated in this document. The following serves as a template to establish a department's drone program and COIT approved use cases.]

A. Participating Department Name: *[Insert department name here]*

Specifications: Each City drone must have a global positioning system. The software and/or firmware used to operate the drone must be up to date and maintained.
[Insert additional/specific departmental information here]

Safety: Drones must be operated in a safe manner. City drones should not be operated in a way that causes personal injury or property damage. Drones may not have features (e.g., lights, coloring) or be used in a way that distracts drivers or other aircraft.

Drones that lose GPS signals should be set to hover in place. Additionally, drones that lose signals to their remote operator or when low power is detected should be set to return to home/origin.

[Insert additional/specific information related to departmental use cases here]

Training: Drone operators must obtain remote pilot certifications from the Federal Aviation Administration (FAA) and must comply with all other FAA requirements.

[Insert additional/specific departmental information here]

Notification: The department shall notify the public of intended drone operations at the site of operations through signage in readily viewable public areas. In addition, the department shall notify the public of all drone flights by publishing flight summary data on the open data portal 24 hours in advance of operations. The department's notifications shall include flight summary information and the type of data to be collected (See Appendix B for the City's Flight Summary Form).

NOTE: Pre-notification is not required when drones are used for emergency authorized uses. In those situations, flight summary information must be submitted within 48 hours after the operation.

[Insert additional/specific information related to departmental use cases here]

No Fly Zones: Drones may not be used within five miles of an airport or in any FAA no-fly zone unless approved by the appropriate authority. City drone operations must comply with FAA rules.

Drones may not hover over trolley, streetcar, or light rail line wires, above rail, bus and parking control facility yards, unless authorized by the SFMTA.

Drones are not authorized within 500 feet of historical landmarks without authorization from building management or owners, or where an emergency exists or FAA waiver is provided. San Francisco historical landmarks are defined by Article 10 of San Francisco's Planning Code. (e.g. City Hall, the Ferry Building. A full list is available here: <https://sfplanning.org/preservation>)

Drones may not fly over San Francisco Port properties subject to the Maritime Transportation Security Act of 2002 without the permission of the Port and/or terminal operator. Port officials will provide City agencies with a list of regulated maritime facilities.

[Insert additional/specific information related to departmental use cases here]

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- Privacy:** The department must have an authorized purpose to collect information using a drone, or use drone-collected information. Should information be incidentally collected that could be used to identify persons or private information, the department shall remove all personal identifiable information from raw data footage.
- [Insert additional/specific information related to departmental use cases here]*
- Data Security:** Departments are strongly encouraged to only live-stream Drone Data and not retain any Drone Data where possible. COIT has advised the department to not retain archives of raw, unprocessed drone data once the business purpose is accomplished. The department must restrict access to any raw drone footage it retains to authorized staff. Distribution of raw drone data is restricted to authorized departments for the purpose of cleansing and processing data only. In all other circumstances, the City may not exchange raw, unprocessed drone-collected data between departments or disclose such data to the public except for exigent public safety needs or as required by law.
- [Include this sentence if the department’s data retention policy does not explicitly cover information collected by a drone]
- The department may store raw data up to a maximum of one year. Exceptions to this standard must be supported with documentation and a clear rationale, and maintained by department staff to be reviewed by COIT.
- [Insert additional/specific information related to departmental use cases here]*
- Compliance:** All City drone operators must submit flight information to the open data portal here: <https://sfgov1.sharepoint.com/sites/ADM-Drone/SitePages/Home.aspx>
- [Insert additional/specific information related to departmental use cases here]*
- Contractors:** Contractors shall comply with the following requirements:
- Ownership and handling of City Data: “City Data” includes without limitation all data collected, used, maintained, processed, stored, or generated by or on behalf of the City, including as the result of the use of the services provided by a contractor. The City retains ownership and rights to City Data, including derivative works made from City Data and the licensing applied to the data. Contractors must treat City Data using the same Privacy and Data Security requirements that apply to CCSF employees.
 - Unauthorized use prohibited - Engaging in the unauthorized use of drones or activities that are inconsistent with this Policy may be grounds for termination of the relevant contract, as well as applicable monetary fines and penalties.
 - Data Security – Contractors must identify the application used to remove personally identifiable information that may have incidentally collected during an authorized flight.
 - Insurance required – Contractor drone operators must provide proof of liability insurance commensurate with current SFPUC insurance requirements for contractors.
 - Use Agreement Language - If an Unmanned Aircraft System (UAS) is used for any purpose under this permit either directly by the Contractor or by a subcontractor to the Contractor, the Contractor shall ensure that such activity is covered by Unmanned Aircraft Systems insurance. The Contractor must submit proof of UAS insurance with an aggregate limit of at least \$2,000,000. The certificate of insurance must include a separate policy endorsement showing proof of UAS

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coverage which at a minimum shall include coverage for damage to person and property. A second (separate) endorsement must be submitted naming the City and County of San Francisco, its officers, agents and employees as Additional Insured for this coverage. NOTE: Each of these two endorsements require a separate attachment to the certificate of insurance.

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Appendix B: CCSF Drone Reporting Forms

All specific information regarding the City & County of San Francisco's authorized use of drones will be available on the Open Data Portal (<https://datasf.org/opendata/>). The following forms preview information collected on each Department's authorized uses and flight summary information.

CCSF Drone Policy - Department Authorized Uses	
Drone Descriptive Title (max 50 characters)	
Department:	* ▼
In the following section, please fill out this form and the following questions for EACH PROPOSED AUTHORIZED USE.	
-- AUTHORIZED USE CASE	
Provide an operational description of how your department will use drones (Please focus your answer on the operational details and include the following elements: purpose of flights, who will use the drones, what department goal do the flights help meet, how do the flights improve a process.)	
What alternative options are available instead of using drones?	
Why are drones a better option?	
Please list the specific locations for planned drone flights. <i>Please provide specific details on anticipated locations. Within the City, please describe typical flight locations (e.g. neighborhoods, parks, etc..). Outside the City, please list the counties where flights will be conducted.</i>	
In a given month, how frequently do you anticipate using drones?	
Please describe how your department will use data to support a clear business objective.	
What are all the types of data drones will collect? <i>Please list all types of data any drone might collect, including data collected for a specific business purpose and any other data your drones will collect as part of normal operations.</i>	

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In any scenario, will personal identifiable information be collected?		Select... ▼		
If yes, please describe what kinds of PII				
If yes, how will your department provide timely notice of the drone flight(s) to the public?				
Who will be flying drones for your department? Contractors or Staff				
How will your department ensure drones are physically fit to fly and include latest software updates?				
How will your department evaluate the impact of its drone program?				
Please provide additional details on your data policies regarding information collected by drones:				
<i>Please identify your business practices for the type of data collected</i>	Type of Data <i>Please list all types of data any drone might collect, such as video, images, infrared, sound, etc. Each data type should be in its own row.</i>	How long will you keep the data and where will you store it? (Note: it is best practice not to keep data indefinitely. Please also cite the location for your policy)	What privacy risks do you anticipate in the collection of this specific type of data? (If none, please explain why)	What is your process to protect privacy and filter out unneeded data (e.g. anonymizing, deleting PII, etc.)?
Business Use Data <i>This data is intentionally collected to support a specific operations</i>				
All Other Data <i>Please identify and describe your practices to for unintended data.</i>				
Save & Close		Submit		

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Flight Summary Form

Department *

Authorized Use new *

Name(s) of pilot(s)

FAA provided commercial pilot certificate number *

FAA provided drone registration number *

Drone Make & Model *

Briefly describe alternatives considered

Street Address (Area Surveyed)

Please enter the address with the full number, name and type, for example: 1 South Van Ness Avenue

City (Area Surveyed)

County (Area Surveyed) *

Zip Code (Area Surveyed)

Location [Specify location](#) Or [Use my location](#)

Location data will be sent to Bing Maps. [Learn More](#)

Start Time *

note: if time exceeds 24 hours, please separate flights into multiple reports

End Time *

Last Evaluated

When was the drone last evaluated to ensure proper functioning (including physical examination and software updates)?

Privacy Risks *

Please summarize privacy risks associated with this flight.

Privacy Risks - Mitigation *

What actions will be taken to mitigate privacy risks?

Type of Data Collected * Images
 Video
 Specify your own value:

Does this data include PII?

If Sensitive PII or unsure...How will you store the data?

If Sensitive PII or unsure...How long will you keep the data?

Have you notified the public of the flight? How and when?