

PUC Unmanned Aerial Vehicle-Drone Annual Surveillance Report 2024

Fields marked with an asterisk (*) are required.

Change In Authorized Use Cases ▼



1.1 In the last year, did your department have use cases which differed from your “approved use cases” in your BOS-approved policy?

No

Change in Authorized Job Titles ▼



2.1 Does the list of “authorized job titles” in your BOS-approved policy need to change? (i.e. Do you need additional job titles to be authorized to access the data, or do you need to remove any current job titles?)

Yes


2.2 Please provide an updated list of authorized job titles.

SFPUC Photographers: 1770 Photographer, 1774 Head Photographer; Water Supply and Treatment Division: 5312 Survey Assistant II, 5314 Survey Associate, and 5216 Chief Surveyor; Water Natural Resources: 2483 Biologist; Wastewater Engineering/Project Management: 5211 Eng/Arch/Landscape Arch Sr , 5212 Engineer/Architect Principal, 5508 Project Manager 4 , 5201 Junior Engineer, 5203 Assistant Engineer, 5130 Sewage Treatment Plant Supt, 0943 Manager VIII , 1824 Pr Administrative Analyst , 7252 Chf Stationary Eng, Sew Plant, 0942 Manager VII, 5506 Project Manager 3, 5241 Engineer, 0933 Manager V, 1844 Senior Management Assistant, 6319 Senior Const Inspector, 0955 Dep Dir V, 0941 Manager VI, 1844 Senior Management Assistant , 0932 Manager IV, 1446 Secretary 2. 1774 (Head Photographer), 5203 (Assistant Engineer), 1770 (Photographer), Construction Contract Manager, Director of Contract Administration Bureau

2.3 Why have the job titles changed?

The 1774 Head Photographer and 1770 Photographer use drones to create records of documentation for infrastructure capital projects. The Survey Staff in SFPUC's Water Supply and Treatment Division use drones to support various projects regarding land detection change and imagery capture throughout PUC properties. The Water Natural Resources Biologist oversees an annual census project to collect rare plant population data in an SFPUC watershed. The remaining job titles in Wastewater Engineering/Project Management had access to data collected by contractors working on project WW-647R "Southeast Water Pollution Control Plant Biosolids Digester Facilities" and WW-628 "Southeast Plant New Headworks Facility Project ". Drone images and video help the WasteWater project teams track project progress.

Change in Number and/or Type of Technology ▼

 Replacement of Old Technology

4.1 Has any technology listed in the policy been replaced?

No

 Addition of New Technology

5.1 Has any technology been added which is not listed in the policy?

Yes

5.2 Why has the technology been added?


Additional drone units in the procured since the Policy was reviewed by the Board of Supervisors in 2021.

5.3 Please list technology which was added (include manufacturer and model information.

The SFPUC currently owns seven drones - two drones in SFPUC Infrastructure flown by SFPUC Photographers: DJIPhantom 4 Pro and a DJI Mavic 3 Pro. Five drones are owned by the SFPUC Water Supply and Treatment Survey Section: Two DJI Mavic 2 Pros, One DJI Mavic 3 Thermal, One DJI M300, One DJI M350


5.4 Please list how many units have been added.

Six units were added since the Policy was reviewed by the Board of Supervisors in 2021.

 Ceased Operation of Technology

6.1 Is any technology listed in the policy no longer in use?

No

 Services or Equipment Sources

7.1 List any and all entities, companies or individuals which provide services or equipment to the department which are essential to the functioning or effectiveness of the Surveillance Technology (list "N/A" if not applicable): *

The following SFPUC contractors have operated non-SFPUC owned drones for various SFPUC projects: Minilab Factory USA/SF Drone School; Multivista, Chris Constantine, Obed Alfonso Diaz

Surveillance Technology Goals 



8.1 Has the surveillance technology been effective at achieving its identified purpose?

Yes

8.2 In 3-5 sentences, please explain how the technology has or has not been effective

Drones continue to be a valuable tool for construction management, inspections, environmental monitoring, and marketing and public education. They continue to allow for financial savings, time savings, staff safety, and data quality. Drone imagery continues to promote SFPUC projects and education the public on our mission and operations. Additionally, drones continue to allow for efficient and safe inspection of critical infrastructure.

Data Sharing 



9.1 Has data acquired through the surveillance technology been shared with entities outside of the department?

Yes

9.2 Was the data shared with city and county departments or other entities associated with city and county government?

Yes

9.3 List which departments received surveillance technology data from your department, what type of data was disclosed, under what legal standard the information was disclosed, and a justification for the disclosure.

The following SFPUC contractors working on SFPUC projects operated drones to help them fulfill their deliverables:

1. AECOM supported the SFPUC with the annual Fountain Thistle Census around the Crystal Springs Reservoir. This annual census effort includes a UAV image capture effort for one of the mitigation sites.
2. Sundt, contractor for WW-628 Southeast Plant New Headworks Facility Project, as well as Minilab Factory USA/ SF Drone School operated drones to collect images and video to show site progress at Southeast Plant
3. Contractor/subcontractors/Project Design Team for WW-647R Biosolids Digester Facilities Project operated drones and viewed drone footage. These include: MWH Constructors/Webcor Builders, Monterey Mechanical, Multivista, Chris Constantine, Obed Alfonso Diaz, Jacobs, Brown and Caldwell, ENGEO, Structus, Black and Veatch, HCLA, SRT Consultants, CM Consultants (Arcadis, ECS, Thier Group, Parsons, RDH Building Science, DCMS), HDR, Subcontractors (DN Tanks, Sachs Electric, VMA Communications, Malcolm Drilling, Smartvid, Monterey Mechanical, F3 & Associates, ClearStory), Russell Clough, Jim Foley, Bill Nugteren

9.4 Was the data shared with entities outside of city and county government?

Yes

9.5 List which non-city entities received surveillance technology data from your department, what type of data was disclosed, under what legal standard the information was disclosed, and a justification for the disclosure.

As noted above, SFPUC contractors working on SFPUC projects operated drones to fulfill project deliverables

Accidental Receipt of Face Recognition Data ▾



10.1 Did your department inadvertently or unintentionally receive, retain, access or use any information obtained from Face Recognition Technology?

No

Complaints ▾



11.1 Has your department received any complaints and/or concerns from community members about this surveillance technology?

No

Violations ▾



12.1 Were there any violations of the Surveillance Technology Policy or Surveillance Impact Report, reported through community members, non-privileged internal audits, or through other means in the last year?

No

12.4 Has your department conducted any internal audits of the technology?

Yes

12.5 Please provide general aggregate information about the result of your department's internal audits.

SFPUC requires SFPUC personnel to document planned drone flights from both contractors and SFPUC employees using a Flight Summary form that is routed to SFPUC Emergency Planning & Security (EPS). EPS ensures that the planned flight is in compliance with the SFPUC Drone Policy and then uploads the flight information into the COIT SharePoint Portal. Since EPS reviews flight information for Policy compliance before a flight occurs, there are no policy violations.

12.6 If the audits revealed violations, please list any actions taken in response to the violations.

n/a

Statistics and Information about Public Records Act Requests ▾



13.1 Has your department received any public records act requests for this surveillance technology?

No

Total Annual Costs for the Surveillance Technology ▾

**14.1 List the number of FTE (new & existing).**

It takes the 0932 Emergency Planning Director and 1824 EPS Pr. Admin Analyst about 2 hours a week collectively to review flights and upload into the COIT Portal. The SFPUC Photographers and WST Surveyors operate drones on an as-needed throughout the year.

14.2 Are there one-time costs for Fiscal Year 2024-2025?

Yes

14.3 Are there one-time Salary and Fringe costs?

No

14.5 Are there one-time Software costs?

No

14.7 Are there one-time Hardware/ Equipment costs?

Yes

14.8 List total one-time Hardware/ Equipment costs for FY 2024-2025.

The Water Supply & Treatment Division is working to procure a compatible desktop computer to replace one of the workstations in Burlingame to be able to use the drone processing software. The new desktop workstation is being submitted for purchasing, and the cost of it is about \$10,700.

14.9 Are there one-time Professional Services costs?

No

14.11 Are there one-time Training costs?

No

14.13 Are there one-time "Other" costs?

Yes

14.14 List total one-time "Other" costs for FY 2024-2025:

SFPUC plans to have 2 employees become additional drone pilots for the SFPUC. The FAA pilot exam is \$175 per pilot.

14.15 Are there annual costs for Fiscal Year 2024-2025:

Yes

14.16 Are there annual Salary and Fringe costs?

Yes

14.17 List total annual Salary and Fringe costs for FY 2024-2025:

SFPUC estimates that it cost about \$35,300 annually to operate drones. As mentioned above, it takes the 0932 Emergency Planning Director and 1824 EPS Pr. Admin Analyst about 2 hours a week collectively to review flights for compliance with the Policy. Annual labor cost for flight review and approval is estimated at \$9,300. SFPUC personnel fly drones on an as-needed basis. SFPUC pilots are of various job classes including 5312 Survey Assistant II, 5314 Survey Associate, 1770 Photographer, 1774 Head Photographer. Based on average salaries, number of flights, and duration of flights, we estimate that it costs about \$26K in annual salary costs to pay SFPUC employees as they operate drones as part of their job duties.

14.18 Are there annual Software costs?

Yes

14.19 List total annual Software costs for FY 2024-2025:

Adobe Creative Cloud, Agisoft Metashape, Pix4D, B4Ufly, Aloft, and ESRI GIS products are all software/apps currently in use in our drone operations. Annual software subscription costs are estimated to be about \$15K.

14.20 Are there annual Hardware/ Equipment costs?

No

14.22 Are there annual Professional Services costs?

Yes

14.23 List total annual Professional Services costs for FY 2024-2025:

\$7,873.44 for one-year of flights to document construction progress at SFPUC Southeast Treatment Plant (750 Phelps St) by vendor Minilab Factory LLC/SF Drone School. This expense may occur annually until completion of capital projects at location

14.24 Are there annual Training costs?

No

14.26 Are there annual "Other" costs?

No

14.28 What source of funding will fund the Surveillance Technology for FY 2024-2025?

SFPUC Operating budget

14.29 Have there been any changes to the one-time costs from your department's approved Surveillance Impact Report?

Yes

14.30 Why have the one-time costs changed?

The Impact Report had no one-time "other" costs. As noted above, SFPUC has one-time costs in FY24-25 to procure FAA licenses and a desktop workstation.

14.31 Have there been any changes to the annual costs from your department's approved Surveillance Impact Report?

Yes

14.32 Why have the annual costs changed?

The Impact Report had no annual "software" costs. As noted above, SFPUC has an annual cost to renew subscriptions for drone processing software.