



City of Dallas

Unmanned Aerial Systems (UAS) For Public Safety

**Public Safety Committee
November 8, 2021**

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City of Dallas

Presentation Overview



- Background/History
- Purpose
- Staffing/Duty Hours
- Operational Guidelines
- UAS Safety
- UAS Applications
- Steps Taken
- Proposed Actions
- UAS Fleet
- Next Steps



Background/History



- Technology is consistently advancing which increases applications and uses
- DPD began the process of adopting UAS technology in 2015
- Only a supplement, not a replacement for police helicopter operations
- Static vs Dynamic events



Purpose



- Aerial camera platform
- Augment coverage of large public events
- Departmental force multiplier
- Provide de-escalation tactics, transparency, and increased officer safety
- Provides real time video streaming to web-based platforms
- Support Patrol/Investigative Operations



UAS Squad



- 5 FAA Part 107 Pilots (4 officers/1 Sergeant)
- Assigned to Special Operations/Air Support Unit
- Working 7 days a week, 10 hour shifts with call backs.
- Duty Hours – 10a – 8p



Operational Guidelines



- Requires a Certificate of Waiver or Authorization (COA) from the FAA to operate UAS in the airspace over Dallas
- DPD's Jurisdictional COA grants operational abilities in all of Dallas County as well as adjoining parts of Denton, Collin, Rockwall, and Kaufman Counties
- Standard use does not allow for UAS operations outside visual line of sight
- UAS will not perform a surveillance flight for the purpose of generating probable cause
- Cannot fly directly over people



Operational Guidelines continued



- Texas Government Code outlines UAS operations
 - Chapter 423. Use of Unmanned Aircraft
 - Video recording is only authorized during:
 1. Warrant Searches
 2. In progress Felony Offenses
 3. Life and Death Incidences
 - Chapter 423 prohibits recording misdemeanors and offense resulting in fine only



UAS Application



Approved Uses:

- Preplanned Operations/Special Events
- Search and Rescue
- Investigating armed and dangerous suspects
- Missing person searches
- Support Criminal Investigations
 - 3-D crime scene reconstruction
 - Accident reconstruction
- Environmental and illegal dumping investigations
- Survey fire scenes and check for hot spots
- Civil Unrest
- Tactical Operations / Tactical Apprehensions
- Support DFR
- Environmental / Natural Disaster
- Hazardous Building Searches
- EOD Support
- Support Call Answering



Steps Taken



- DPD Standard Operating Procedures finalized
- Risk Management Approval process finalized
- Trained Dallas Police Department FAA 107 pilots. Several helicopter unit personnel are also FAA licensed Remote Pilots
- Completed basic UAS training
- Fleet acquired
- Acquired FAA approval for UAS operations
- Acquired callsigns from Communications



AIR ONE and UAS



- Air One is ideally used for any operation needing greater aerial view
- The UAS Squad is ideal for searches where Air One would not be able to see. i.e. Inside structures, under obstructions like trees, etc.
- High risk or high threat areas. i.e., abandoned/damaged buildings, armed suspects hiding from officers, etc.
- All UAS can record and preserve evidence.



UAS Fleet



- DJI Mavic Mini 2 – (specifications)
 - Building searches
 - Training
 - Tactical Operations
 - Any situation where a low signature presence is required



UAS Fleet



- DJI Mavic Enterprise Dual (specifications)
 - Issue Crowd Warnings
 - Search Hazardous Locations
 - Find Hiding Suspects
 - Provide Actionable Intelligence for Tactical Situations



UAS Fleet



- DJI FPV (specifications)
 - Small precision application
 - Tactical application
 - Acts as a scout UAS
 - Active shooter / foot chases



UAS Fleet



- DJI Matrice 300 RTK – (specifications)
 - Large Scale Events such as sporting events or parades
 - Any operations where commanders want a constant live video feed to coordinate and deploy resources
 - Natural disaster response/search and rescue
 - Night or low light missions



Proposed Actions



- Public safety briefing
- PIO release to public
- Roll Call Training Bulletin
- Patrol Station Briefings



Next Steps



- Train Pilots
 1. 40 hours UAS Basic Pilot class. – completed July 29, 2021
 2. 4 weeks flight training time to include field deployments
 3. Collaborative training with local and state partners who already have UAS programs
 4. Future acquisition UAS and training Patrol Division personnel
- Distribute General Orders/Patrol SOP





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Questions?