Fairfax County Public Safety Unmanned Aircraft Systems (UAS) Program

The Program

January 16, 2020
Types of Drones
Natural Disasters
Structure Fire
Fire Investigations
Fairfax County Park Prescribed Burns
Infrastructure Inspection
Crash Reconstruction / 3D Modeling
Search / Mapping
First Step

• UAS Program workgroup formed in May 2017
  • Focus: How to effectively and safely implement a UAS program in Fairfax County.
  • Membership: Emergency Management, County Attorney, Risk Management, Public Affairs, Park Authority, Fire & Rescue, Police (Dive team and Search and Rescue), Sheriff’s Office and the Urban Search and Rescue Team (VA-TF1).
• Best practices
• Develop mission profiles
• Site visits / Workshops:
  • Air Traffic Control Facilities (Potomac TRACON, Dulles Airport)
  • FAA Symposium, PVCC UAS Public Safety Workshop
• Standing regional programs (Loudoun, Stafford, Fauquier County, VDEM)
Emergency Management Mission Profiles

• Damage Assessment (Pre-and Post-Disaster Surveys)
• Situational Awareness (EOC Operational Information)
• Response Priority (Resource Management)
• Enhanced 3D mapping
• Training and Exercise
Fire and Rescue Mission Profiles

• Enhanced situational awareness over fire ground operations
  • Public safety
  • Evaluate additional exposures
• Personnel accountability
• Fire, post-blast investigations
• Blasting site inspections
• Fireworks shoots
• Search & Rescue / Swift water operations / Rescues
• Hazardous materials response / Identification
• Preplans
Law Enforcement Mission Profiles

• Locating critical missing persons
• Forensics documentation
• Enhancing safety during water operations
• Crash reconstruction
• Enhancing safety during critical incidents
• Necessary to alleviate an immediate danger to any person

* Any law enforcement or regulatory agency operations will be in strict compliance of Virginia Code § 19.2-60.1
Additional Mission Profiles

• Wildlife population estimates / terrain mapping / movement corridors
• Assessment of critical infrastructure (pipelines, bridges, storm drain systems, antenna towers)
• Stream and water management
• Facility, ditch, building inspections
• Marketing (Parks, Golf Courses, Historic properties)
• Footage to support Channel 16 programming
• County facilities, landscapes and nature
• Inspection of buildings during construction, alterations
• Family programs, ecology projects
• Fire watch for prescribed burns
Program Elements

- Program Manual / Agency SOP / General Orders
- Operator training and certification – Part 107
- Flight and maintenance logs
- Transparency
- Data Management
- Privacy Protection
- Legislation Review / Law Enforcement Use
  - Va. Code Ann. §19.2-60.1 (2015). This section provides that a local government agency having jurisdiction over criminal law enforcement or regulatory violations may not use an unmanned aircraft system except during the execution of a search warrant or an administrative or inspection warrant, unless certain exceptions apply
- Public information
UAS Public Safety Program Manual

• Provides a complete summary of the proposed UAS program
  • Mission Statement
  • Overview of the program
  • Regulatory
  • Administration
  • Protection of Privacy, Civil Rights and Civil Liberties
  • Data Management
  • Operations Positions
  • Safety
  • Operational Training
  • General Operating Procedures
  • Glossary of Terms, Acronyms, Retention Schedules
Next Steps

- Public Safety Committee Presentation (January 30, 2018)
  - Board of Supervisors

- Board of Supervisors Meeting (July 31, 2018)
  - Final decision was deferred
  - Create UAS Task Force
  - Public outreach and opportunities to comment
UAS Task Force

Established UAS Task Force

• Invited community representatives and subject matter experts
• Public meetings: October 17, 30, December 11, 2018 and February 11, 2019
• Discussions on purpose, operations, mission profiles, safety, equipment, training, privacy, data collection and retention, wildlife, program evaluation strategy
• Reviewed and revised the Draft UAS Program Manual
• Developed the Community Engagement Strategy
UAS Task Force Participation

- ACLU
- NAACP
- FAA
- Fairfax Federation
- Leadership Fairfax
- Fairfax Area Disability Services Board
- Greater Reston Chamber of Commerce
- Dulles Regional Chamber of Commerce
- Asian American Chamber of Commerce
- Communities of Trust
- George Mason University
- McLean Citizens Association
- Planning Commission
- Park Authority
- Emergency Management
- Police
- Fire & Rescue
- Public Affairs
- Office of Public Private Partnerships
- Wildlife Biologist
- Audubon Society
- County Attorney’s Office
- Commonwealth of Virginia – Assistant Secretary for public safety – Shawn Talmadge
- Other individual subject matter experts
Community Engagement

• Community Engagement Strategy
  • County webpage:  [www.fairfaxcounty.gov/uas/](http://www.fairfaxcounty.gov/uas/)
  • County email:  uas@fairfaxcounty.gov
  • 30 Day Comment period (January 7 – February 8)
  • Social Media (Twitter, Facebook, Nextdoor)
  • Media:  On Camera (e.g., Fox5, NBC4, ABC7)
  • Other Media:  (e.g., Fort Hunt Herald, WTOP, Insidenova, Tysons Reports, AUVSI Unmanned system magazine, VDEM Daily Briefing)
  • BOS newsletters
  • Fairfax County:  NewsCenter article, Emergency Blog

• Community Presentations / Comment Sessions (6)
Community Engagement - Outreach

• 176 attendees for the 6 outreach sessions

• 133 questions and 29 comments

• Comments/Questions were diverse in terms of topics
  • operations, equipment, budget/staffing, restricted airspace, best practices, partnerships, volunteers, wildlife, privacy, laws, procedures
Community Engagement – 30 Day Comment Period

• 118 responses received via email or Nextdoor

  • Participants were asked to provide feedback or ask questions

  • Comments/Questions were also diverse in terms of topics
    • operations, equipment and technology, budget/staffing, restricted airspace, best practices, cyber, vendor opportunities, partnerships, volunteers, wildlife, privacy, laws, safety and procedures
Public / Media Awareness Strategy

• Media event (program overview, talk with officials, equipment)
• Fairfax Alerts UAS group for notifications of UAS operations
• County web page for UAS (video clips, equipment information, operational missions, Q&A)
• UAS Summit – ½ day
  • Board Auditorium
  • Focus on public and commercial users
  • Presentations by County officials, FAA, airport operations
  • Training, certifications
  • Places to fly (Fairfax County Parks, airspace restrictions)
Final Steps

• Public Safety Committee Presentation (March 12, 2019)
  • Approval as presented – Action item at the next BOS meeting

• Board of Supervisors Meeting (May 21, 2019)
  • Public Safety Program Approved
  • Directed to come back with guidance on other county agency use

• Board of Supervisors Meeting (June 25, 2019)
  • Approval for other county use
Privacy

• No UAS flights beyond visual line of sight (BVLOS).
• No unauthorized surveillance activities.
• When a search warrant is required by law, and no warrant exception exists, flight is prohibited unless authorized by a search warrant signed by a magistrate.
• All UAS users, regardless of agency, shall adopt a posture of minimal data collection, limited to only that data, including images or video recordings, which are essential to complete the objective of the UAS mission.
• To the maximum extent possible, onboard cameras shall be directed toward the area of interest and away from uninvolved individuals or properties.
• UA live feed only transmit capability will be the normal, preferred UAS use.
Today

- Equipment purchase
- Steering Committee
- Webpage
- Notification
- Training
- Program Manual updates
- Regional partnerships
- Annual Report / Executive Summary
- GIS mapping application
- Other agency integration
Training Requirements

• Commitment letter (Agency Head or Supervisor)
• 2 Day 107 Prep Course (In house)
  • Take FAA 107 Exam $150
  • Valid for 2 years
• 1 Hour Orientation class
• 2 Hour Initial flight training (Lake Fairfax Park)
• 3-4 Hours of classroom (program manual, procedures, privacy – written test)
• 4-5 Hours of additional flight training
  • Agency and mission specific
  • Various sites (Popes Head Range, Lorton, Bull Run Regional Park)
Training

- DJI Mavic 2 Dual Enterprise
  - $3,000 – Aircraft
  - $1,500 – Accessories
Training

- DJI Mavic 2 Enterprise
- $3,000
- Aircraft
- $1,500
- Accessories
Training
Training
Fairfax County Fire Training / Helicopter
Fairfax County Fire Training Academy
National Capital Region Airspace
Equipment

- DJI Mavic Zoom
  - $1,499 – Aircraft
  - $1,500 - Accessories
Equipment

- **DJI Mavic 2 Dual Enterprise**
  - $3,000 – Aircraft
  - $1,500 – Accessories
Questions ?
Contact Information

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