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## RECOGNITION OF OUTSTANDING DRONE PROGRAM

**Name of Department/Agency:** Los Angeles City Fire Department

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**How long program in operation?** 3 Years

**How many aircraft in program?** 14

What types of aircraft in fleet? 14 DJI products. Matrice 100; Matrice 210; Matrice 600; Phantom 4 Pro; Mavic 2 Dual/Enterprise; Inspire 1

**How many remote pilots in program?** 8

**Do you operate with COA, Part 107 or both?** Both, Part 107 for training & special events; COA for incidents/emergency response.

**How has your drone program been innovative for your department?** The value of providing a Bird's Eye view on any emergency response is priceless. The Incident Commander and Fire Ground resources now have a tool that increases situational awareness and mitigates risk. The UAS delivers aerial imaging, live-streaming to responding resources, having payload capabilities that support HAZMAT Sensors and cargo-release systems -- to basically using the drone to be a pathfinder for resources. The LAFD Drone has become a go-to-tool that is essential for effective and safe public safety operations.

**How has your drone program enhanced safety for your department?** The LAFD UAS Program has been deployed to almost every brush fire incident since 2017. Each deployment has provided substantial impact, increased awareness of the drone's capabilities, and has been the example of how using this technology fulfills our Fire Chief's strategic plan to innovate and capitalize on technology to improve our public's safety. Southern California brush fires highlighted how valuable the drone can be to the Incident Command. By demonstrating thermal hot spot recognition, GIS mapping, and using the drone to guide firefighters directly to the active hot-spots, we showed how drones can be safe, effective and a benefit to the public.

The success of our program has branched out to supporting our Fire Prevention Bureau. We have supported brush clearance Inspections, making a strong use-case for our Fire Inspectors to use this tool for identifying violations and hazards. Most recently we have engaged in HAZMAT inspections, experimenting with chemical detection and gas sensors. Considering how the drone will help mitigate risk and hazard detection will prevent future disasters from occurring and improve safety for our firefighters who respond to them.

The LAFD UAS program has successfully augmented the resource deployment to all incident response types by adding the visual element to the initial patient/caller contact. It has also provided a foundation developing objectives and deploying tactics as well as supporting secondary and ongoing "size ups" for better resource deployment, particularly from the ground.

The tool has assisted LAFD hazmat teams to identify chemical hazards, locations, access, egress, and provide analysis prior to launching a hazmat team into a potential hazardous environment.

During these incident types UAV's can safely and effectively be put into hazardous environments or areas that could potentially jeopardize firefighter's safety. The "situational awareness" gained by immediate, 360 degree, visual feedback from both eye level and overhead cannot be matched by firefighters on the ground or by helicopters. The LAFD UAS has clearly become a beneficial instrument that improves the prospects of successful emergency management operations, while at the same time delegating risk of response operations to the unmanned vehicle.

Essentially, this technology has allow the Incident Commander unlimited access to the hazard thus providing accuracy of assessments, cause determination, and more effective and timely return to operating businesses and repopulating evacuated residential areas affected by the emergency.

**How has your drone program improved operational effectiveness?** Collaborating with our LAFD GIS Unit, the LAFD UAS Program has developed a complete workflow for Brush Inspection, pre-hazard assessment, and brush fire response. The workflow produces immediate results, improving and fortifying the Incident Commander's situational awareness and risk management decisions. Whether it is for pre-hazard planning or during an active emergency incident, mapping with UAS has demonstrated a safe, efficient, and cost-effective solution.

**If you have news stories of success of your program or missions, please provide links to stories (More than one link is OK):**

<https://www.facebook.com/LAFDUASPROGRAM>

"LAFD YouTube Channel:

UAS Brush Clearance Inspection Program:

<https://www.youtube.com/watch?v=0itv1zJs1nU>

UAS - Why does LAFD use them at brush fires:

<https://www.youtube.com/watch?v=jCSVrlv3NOc>

Mt Washington Residents Thank Frontline Workers - LAFD Listens:

<https://www.youtube.com/watch?v=AKwBPCuTqXc>

Los Angeles City Fire Department Recruit Class 19-1 Graduation | April 9, 2020:

<https://www.youtube.com/watch?v=PCCHwsDHNNg>

LAFD US&R and UAS Training Event including the Matrice 600:

<https://www.youtube.com/watch?v=ty60XDYHnSk>

LATogether Super Bowl Teaser:

<https://www.youtube.com/watch?v=SzQuejMF65k>

LAFD Utilizes Drones (UAS) Technology to Help Battle Griffith Park Fire 7/10/18, Video 3:

<https://www.youtube.com/watch?v=jal1jUEk2Xk>

LAFD Utilizes Drones (UAS) Technology to Help Battle Griffith Park Fire 7/10/18, Video 1:

<https://www.youtube.com/watch?v=OTjoJRt1Ajs>

LAFD Utilizes Drones (UAS) Infrared Technology to Help Battle Griffith Park Fire 7/10/18, Video 2:

<https://www.youtube.com/watch?v=Alq0tx2U4gQ>

LAFD Utilizes UAS/Drone Imagery to Help Battle Portola Wildfire:

<https://www.youtube.com/watch?v=rmJeG60HVNo>

LAFD Unmanned Aerial System ""Drone"" Demonstration:

<https://www.youtube.com/watch?v=QD6KVO6OLg8>

LAFD adds drones to firefighting toolbox | ABC7:

<https://www.youtube.com/watch?v=Jb127zmv8A8>

LAFD Says Drone Technology Can Help Them Fight Fires:

<https://www.youtube.com/watch?v=XyL8kMOJFw8>

LAFD Drone Demo:

<https://www.youtube.com/watch?v=gijRoxZFLQY>

LAFD Drone Flight at Skirball Fire:

<https://www.youtube.com/watch?v=7aAWr2JZAb8>

LAFD Drone Demonstration:

<https://www.youtube.com/watch?v=gUNUT70SSyo>

## TWITTER

LAFD US&R TF85: Simulated Tree Trimmer Rescue/Pickoff:

<https://twitter.com/PIOErikScott/status/1126278750750961666?s=20>

LAFD High Line Rope Rescue:

<https://twitter.com/i/status/1155579802260164608>

LAFD Portola Fire Thermal:

<https://twitter.com/i/status/1006904713441259520>

LAFD Cargo Release (M600):

<https://twitter.com/i/status/1155580821673086976>

LAFD Brush Demo:

<https://twitter.com/i/status/1271474060535296000>

LAFD Griffith Park Fire Thermal:

<https://twitter.com/i/status/1017892502244712448>

LAFD Dodger Stadium COVID Super Site:

<https://twitter.com/i/status/1269660475832168448>

LAFD NIST Course:

<https://twitter.com/HotShotsPilot/status/1141908512194408448?s=20>

## FACEBOOK:

<https://www.facebook.com/LAFDUASPROGRAM>

Class 18-2 at EVOC Training:

<https://www.facebook.com/105983284099804/videos/611030786430108>

Recruit Class 19-2 First day:

<https://www.facebook.com/105983284099804/videos/733991170673107>

Defensive driving and emergency braking:

<https://www.facebook.com/105983284099804/videos/315024012818605>

Salute to Glendale Memorial:

<https://www.facebook.com/105983284099804/videos/616043222314585>

TF12 Cliff Rescue Drill In Sunken City:

<https://www.facebook.com/105983284099804/videos/230862634929377>

TF12 Roof Operation Drill:

<https://www.facebook.com/105983284099804/videos/833056570537802>

Class 19-1 graduation with social distancing:

<https://www.facebook.com/105983284099804/videos/2951722731581537>

LAFD Driver Operator 1B:

<https://www.facebook.com/105983284099804/videos/725828171155343>

LAFD TF12 training day on Company Operations:

<https://www.facebook.com/105983284099804/videos/642155663227149>

LAFD UAS Program AIRWORKS 2019:

<https://www.facebook.com/105983284099804/videos/2478642915792> DJI Airworks 2019 at FHMTTC:

<https://www.facebook.com/105983284099804/videos/532276140873281>

Los Angeles Fire Depts 911 Memorial Ceremony:

<https://www.facebook.com/105983284099804/videos/397568184287020>

Colorado Fire, Glendale:

<https://www.facebook.com/105983284099804/videos/2490643127625865>

Colorado Brush Fire incident UAS images:

<https://www.facebook.com/105983284099804/videos/896031504113769>

Colorado Brush Fire incident in Eagle Rock:

<https://www.facebook.com/105983284099804/videos/470568623497565>

Batt2 Drill Day Multi Company Operations:

<https://www.facebook.com/105983284099804/videos/1298559893642406>

US&R Task Force 85 Pickoff/Tree Trimmer Drill:

<https://www.facebook.com/105983284099804/videos/773371783079038>

M600 payload capability:

<https://www.facebook.com/105983284099804/videos/531422270935590>