



HERE COME THE DRONES

Flexible and cost effective, these eyes in the sky are expanding the capabilities of emergency response.

By Kevin Schafer

Consider a police officer arriving on the scene of a commercial burglary and immediately launching a unmanned aerial vehicle that can clear the roof of the structure in minutes. Or consider a firetruck arriving on a fire scene and a tethered drone with thermal camera launching from a cargo compartment that provides tactical information to the on-scene commander. In coming years, public safety agencies will operate unmanned aerial systems (UAS), also known as drones, on a routine basis.

The applications for the use of unmanned aircraft are evolving rapidly and public safety agencies that adopt this technology will find that UAS are a force multiplier and will be in the position to help develop a cutting-edge public safety tool. Public safety agencies already operate UAS for a variety of missions, including scene documentation, aerial perspective, critical incident planning, situational awareness, tactical deployment, visual perspective and search and rescue.

Unmanned aircraft can be used to provide an aerial perspective during special event planning and then operated to provide situational awareness during the event, allowing

the incident commander to direct resources effectively. The UAS transmits live video to a ground control station, which can be viewed by the pilot, incident commander or other personnel. This video and any still photographs are also recorded to storage media, usually an SD card, and can be viewed later for closer analysis or preserved as a record of the incident. In areas where manned aircraft are unavailable UAS may be the only means of gaining an aerial perspective and in jurisdictions with a manned aviation program UAS can supplement these resources.

Indoor flight is another developing area of UAS operations. This may be in support of law

enforcement tactical operations, inspections of dilapidated or damaged structures, investigation of fire scenes where the structure can no longer be entered safely or inside a structure contaminated by a hazardous material.

As UAS programs become more common, the use of unmanned aircraft in search and rescue operations has increased. The first arriving units may deploy relatively small unmanned aircraft with optical cameras that immediately provide an aerial perspective to supplement ground units and allow for an immediate and hasty search. As the search evolves, larger unmanned aircraft with sophisticated optical and thermal cameras may be deployed.

Unmanned aircraft can be especially useful in jurisdictions where public safety agencies do not have access to manned aviation or when manned aviation assets have a long response time. Unmanned aircraft will not replace manned aviation but can be used to supplement these assets. In some terrain, such as deep ravines or other areas inaccessible to manned aircraft, a UAS may be the only available option for deploying a thermal