



Unmanned Aircraft Systems in the Vector Control Industry

Unmanned Aerial Systems (UAS) – better known as drones – will make the vector control industry more efficient and safe.

VECTOR CONTROL OPERATIONAL BENEFITS FROM THE USE OF DRONES:

- Increased efficiency of operations while reducing costs of equipment and labor
- Zero footprint on sensitive lands, e.g., marshes and wetlands
- Efficient surveillance for breeding sites using aerial imagery with real-time video link and near infrared imagery in locations unreachable by current methodologies
- Directed aerial application of larvicides near sensitive areas, reducing drift
- Aerial application of adulticides in small treatment locations
- Reduced noise associated with traditional fixed wing or rotor wing manned aircraft
- Reduced fuel emissions
- Improved employee safety by using UAS in remote areas
- Increased operational cost efficiencies compared to manual applications

POLICY CONCERNS

MVCAC is working closely with public health agencies and mosquito control product manufacturers to expand the toolbox of mosquito surveillance and control strategies. These partnerships are important to prevent life-threatening and debilitating diseases despite ongoing fiscal and policy challenges. New tools and strategies are needed to protect public health and safety because of the increased threat of mosquitoes now detected in California which are capable of spreading life-threatening diseases to humans and animals. An emerging tool to fight mosquitoes is the use of drones for both aerial surveillance and mosquito control applications.

For example, in urban settings drones could be used to identify unmaintained swimming pools that produce mosquitoes posing a public health threat. While it is agreed that a property cannot typically be physically entered to abate a nuisance without an appropriate warrant, merely gathering information to protect neighbors from disease should not be unnecessarily restricted. In rural settings, drones can help agencies fight mosquitoes and other vectors in remote locations, such as in wetlands. In addition, UAS are less disruptive in wildlife management areas than physical entry and provide a significant savings over manned aircraft.

Although MVCAC understands and supports the need to protect privacy by limiting the use of drones or requiring search warrants when drones are used by law enforcement, several bills introduced in previous legislative sessions have been too restrictive in limiting drone use without considering how they may impact public safety. While ongoing federal rules provide some guidance on how to safely use drones in commercial settings, placing unnecessary state restrictions would be overly burdensome when drones are used by a public agency whose primary function is protecting public health. Any legislation concerning this subject must recognize the legitimate use of drones to protect public health and safety and not overly restrict the ability to utilize this new technology.

Mosquito and vector control districts particularly need flexibility in being able to use drones for aerial applications of pesticides. California law currently prohibits any person from operating any aircraft in pest control unless the pilot operating the aircraft holds a valid pest control aircraft pilot's certificate issued by the Director of the Department of Pesticide Regulation and an appropriate and valid commercial pilot's certificate issued by the Federal Aviation Administration. The law was written over twenty years ago at a time when aerial applications for pesticides only envisioned the use of manned aircraft without considering emerging technology such as drones. This means that mosquito control districts must currently conduct aerial pesticide applications using manned aircraft with licensed pilots, even though drones present significant environmental and safety benefits and are less disruptive in wildlife management areas than manned aircraft.

MVCAC believes California's pilot license requirements for pesticide applications law needs to be updated to provide more flexibility and clarity that would allow mosquito control districts to safely use drones for aerial applications without having to employ a licensed pilot. With the ongoing challenge of West Nile virus and emerging pathogens such as Zika virus, providing flexibility to the use of drones would bring much needed clarity and public safety benefits.

CONCLUSION

- Unmanned Aerial Systems (UAS) will make the vector control industry more efficient, effective, and safe.
- Using UAS will reduce the physical presence of vector control staff on environmentally sensitive lands.
- The continued development of new UAS technologies will make them increasingly important for vector control agencies.