

# Unmanned Aircraft Systems in the Vector Control Industry

**Issue:** Unmanned Aerial Systems (UAS) – better known as drones - for use in the vector control industry provide numerous efficacies, advantages and safety.

**Background:** UAS are aircraft platforms which exclude or eliminate the need for an onboard human pilot/crew. UAS's are inclusive of autonomous drones and remotely controlled aircraft, both fixed wing and rotor wing. The U.S. Department of Defense has successfully proven the effectiveness, efficiency and safety of UAS. Under the directive of a Certificate of Authorization (COA), or Certificate of Waivers (COW) for public entities, UAS in Federal Aviation Administration regulated U.S. airspace have successfully performed surveillance, imagery and aerial application of commonly applied compounds in the agricultural and vector control industry.

Drones have been used by mosquito abatement districts in the Everglades in Florida and by environmental conservation groups such as the Nature Conservancy in the Cosumnes River watershed in California. This work has proven the viability, efficiency, effectiveness and safety of using UAS's specific to mosquito control needs. In these sensitive and hard to reach areas, UAS's are less disruptive to wildlife than physical entry, and they provide a significant cost savings over the use of manned helicopters.

**Discussion:** The American Mosquito Control Association (AMCA) is concerned that bills introduced this legislative session are too restrictive in limiting the use of drones. AMCA understands that there may be a need to limit the use of drones or require search warrants when drones are being used for law enforcement purposes, but when they are used in rural areas by public agencies whose primary function is protecting public health, such restrictions would discontinue research and development for vector control applications before they have been fully explored.

Another issue of concern is that the legislation requires the purging of information after a relatively short period of time regardless of the content of the information. For example, AMCA member agencies can use drones to survey changes in landscapes over time for purposes of mosquito abatement. This is especially useful for year-to-year comparisons of mosquito habitat as we deal with invasive mosquito species and new public health threats.

## **Vector Control Operational Benefits from the use of Drones:**

- Efficient surveillance for breeding sites using aerial imagery with real-time video link and near infrared imagery in locations unreachable by current methodologies
- Zero footprint on marsh land, sensitive lands, critical habitat, etc.
- Aerial application of larvicides near sensitive areas, reducing drift.
- Aerial application of adulticides in small treatment locations
- Reduces noise associated with traditional fixed wing or rotor wing manned aircraft
- Tremendous operational cost efficiencies as compared to manual applications associated with ATV's, Argo's and hand applications
- Reduced fuel emissions
- Reduced drift, increased deposition into intended treatment area
- Significant employee safety risk reduction in accessing remote areas

**Needed Action:** Any legislation concerning this subject matter needs to recognize the legitimate use of drones to protect public health and safety and not unduly restrict our ability to explore potential future uses of unmanned aircraft for vector control.