



BULLETIN *Risk Control*



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Water Districts and Drones

What Water Districts Need to Know About Unmanned Aerial Vehicles (UAVS)

Across the state, unmanned aerial vehicles (UAVS) or as most people call them *drones*, are changing the way water districts and construction companies do business; using the unmanned camera mounted vehicles to monitor work, obtain real-time data on job progress, and even identify potential hazards.

Inspecting miles of flood control waterways, reservoirs, and other infrastructure is getting easier thanks to new technology. The use of remotely piloted vehicles, especially drones, is quickly increasing as prices come down, and operating them is simplified by connecting them to smartphones, tablets, and laptop computers.

Drones raise safety, privacy, nuisance, and trespassing concerns, all of which are compounded by the lack of accountability associated with most drone operations today. Drones can be operated remotely, making it difficult to identify operators who fly recklessly, harass individuals, or cause injury to persons or property.

On Tuesday, June 21, 2016, the Federal Aviation Administration (FAA) released regulations to govern the use of drones. The regulations, referred to henceforth as Part 107 (a reference to the section of the FAA Regulations where the rules appear), establish modest requirements for anyone who wants to operate a drone for any purpose (whether commercial or recreational).

In Part 107, the FAA acknowledges the authority of state and local officials to pass laws that may touch upon drone operations. The FAA noting

“laws traditionally related to state and local police power—including land use, zoning, privacy, trespass, and law enforcement operations—generally are not subject to federal regulation. Moreover, when it comes to regulating flight altitude, flight paths, operational bans, or any

regulation of the navigable airspace, the FAA did not indicate laws are preempted, rather the agency said consultation with FAA is recommended.

The FAA recently granted authority onto local government to pass laws/ordinances that regulate drones in their respective communities. Therefore, we will have local jurisdiction creating ordinances that will govern the use and airspace issues that surround drones. Bottom line, water districts will need to know the rules of their respective cities or counties.

Part 107 sets the bare minimum federal rules regarding the operation of drones. Below we have part of this regulation regarding the operation of drones. The FAA has made clear the substantial areas in which state and local governments can act.



PARTIAL SUMMARY OF SMALL UNMANNED AIRCRAFT RULE (PART 107) June 21, 2016

<p>Operational Limitations</p>	<ul style="list-style-type: none"> • Unmanned aircraft must weigh less than 55 pounds (25 kg). • At all times the small unmanned aircraft must remain close enough to the remote pilot in command, and the person manipulating the flight controls of the small UAV for those people to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses. • Small unmanned aircraft may not operate over any persons not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle. • Daylight-only operations, or civil twilight (30 minutes before official sunrise to 30 minutes after official sunset, local time) with appropriate anti-collision lighting. • Must yield right of way to other aircraft. • Maximum groundspeed of 100 mph (87 knots). • Maximum altitude of 400 feet above ground level (AGL) or, if higher than 400 feet AGL, remain within 400 feet of a structure. • Minimum weather visibility of three miles from control station. • Requires preflight inspection by the remote pilot in command. • A person may not operate a small unmanned aircraft if he or she knows, or has reason to know, of any physical or mental condition that would interfere with the safe operation of a small UAV.
<p>Remote Pilot in Command Certification and Responsibilities</p>	<ul style="list-style-type: none"> • Establishes a remote pilot in command position. • A person operating a small UAV must either hold a remote pilot airman certificate with a small UAV rating, or be under the direct supervision of a person who does hold a remote pilot certificate (remote pilot in command). • To qualify for a remote pilot certificate, a person must: <ul style="list-style-type: none"> ◇ Demonstrate aeronautical knowledge by passing an initial aeronautical knowledge test at a FAA-approved knowledge testing center. ◇ Hold a part 61 pilot certificate other than student pilot, complete a flight review within the previous 24 months, and complete a small UAV online training course provided by the FAA. ◇ Be at least 16 years old. • Part 61 pilot certificate holders may obtain a temporary remote pilot certificate immediately upon submission of the form.
<p>Aircraft Requirements</p>	<ul style="list-style-type: none"> • FAA airworthiness certification is not required. However, the remote pilot in command must conduct a preflight check of the small UAV to ensure that it is in a condition for safe operation.
<p>Model Aircraft</p>	<ul style="list-style-type: none"> • Part 107 does not apply to model aircraft that satisfy all of the criteria specified in section 336 of Public Law 112-95. • The rule codifies the FAA's enforcement authority in part 101 by prohibiting model aircraft operators from endangering the safety of the NAS.

Here are some examples of accidents that could go wrong while using drones:

- Human failure, inadequate training, and oversight
- Technical failure: mechanical or hardware, software, or poor maintenance
- Problems on public property, privacy, surveillance

The main concerns in using drones are legal liability, public safety, and negative externalities such as noise pollution and disturbing plant and animal life. While drone usage may present new economic opportunities for water districts, local leaders should begin to think about how and when they want to see widespread drone use.

What's Wrong With This Picture?



Look at the photo above and identify what is wrong in the picture. You may want to re-view this picture during your next safety meeting. See answers below.

Ergo Corner

Office Ergonomics - Tips to Avoid Fatigue

1. Make sure that the weight of your arms is supported at all times.
2. Watch your head position, do not crane your head and neck forward.
3. Do not slouch, it puts more pressure on the discs and vertebrae of your back.
4. The monitor should be placed directly in front of you, with the top no higher than eye level.
5. Avoid eye strain by making sure that your monitor is not too close. It should be at least an arms length away.
6. Feet should not be dangling when you are seated.

Answers:

1. Lack of personal protective equipment such as safety glasses, full-face shields safety glasses, or hard hats.
2. Pedestrian safety—For the safety of both workers and pedestrians, barricades should separate foot traffic and construction.

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