

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

With the new rules that just came out that give some guidance on the use and operation of Unmanned Aircraft that must weigh less than 55 lbs. called Small Unmanned Aircraft (UAS) for business and government use of drones. These new rules take effect in late August for UAS of 55 lbs or less for non-hobbyist operations.

1. The unmanned aircraft must remain within Visual Line Of Sight (VLOS) only. It must be monitored remotely by the person manipulating the flight controls or it must remain within the VLOS of a visual observer that is in contact with the person manipulating the flight controls. The UAS observer must be capable of seeing the UAS with vision that is unaided, for example cannot use binoculars to keep the UAS in site.

2. The use of on board camera cannot satisfy the "see and avoid" requirements but can be used in addition to other ways that meet this requirement, a Visual Observer.

3. The UAS can be flown during daylight or in twilight (30 Minutes before official sunrise to 30 minutes after official sun set, local time) with appropriate anti-collision lighting. The minimum weather conditions is visibility must be three miles from the location of the flight, control station, and the maximum height is 400 feet above the ground with a Maximum speed of 100 MPH or 87 knots.

4. Flights must not occur over anyone who is not directly participating in the operation of the UAS.

5. No operation of UAS from a moving aircraft, or a moving vehicle unless the operation is over sparsely populated area.

6. Operation in Class B, C, D, and E airspaces are allowed with Air Traffic Controller permission and in class G airspace are allowed without the Air Traffic Controller.

7. No person shall act as a remote pilot in command or a Visual Observer for more than one unmanned aircraft operation at one time.

8. The drone operator must always avoid manned aircraft as well as always yield right of way to other aircraft and above all never operate in a careless or reckless operation or the carrying of any hazardous materials.

9. The total maximum weight of the unmanned aircraft is 55 lbs and any payload or additional systems that are attached to the unmanned aircraft must be securely attached and not affect the flight characteristics or controllability of the aircraft and will not exceed 55 lbs.

10. The FAA may offer a waiver of some of the restrictions if an operator provides the proposed flight will be conducted safely. The FAA is making an online portal available to apply for the waivers.

11. The UAS pilot in command must conduct a preflight check of the UAS before flight to ensure that it is in a condition for safe operation to include checking the communications link between the control station and the UAS.

12. The pilot or UAS controller must report to the FAA any operations or incident that resulted in serious injury, loss of consciousness, or property damage of at least \$500 within 10 days

13. As of this coming August the person that is actually flying the drone must be at least 16 years old and have a remote pilot certificate with a small UAS rating, or be directly supervised by someone with such a certificate. To obtain this certification the individual must pass an initial aeronautical knowledge test at an FAA approved knowledge testing centers or have existing non-student Part 61 pilot certificate. The TSA will conduct a security background check of all remote pilot applications prior to issuance of a certificate.

14. Although the new rules does not address privacy issues it is recommended that the drone pilot to check with local and state laws and notify people and property owners in the area before gathering information through remote sensing technology or photography.

15. With the Voluntary Best Practices for UAS Privacy, Transparency, and Accountability is also an Appendix entitled, "Guidelines for Neighborly Drone Use" that is intended to be a quick and easy reference guide for recreational UAS operators.

Benefits and useful activities of unmanned aircraft, Drones

The benefits of commercial and private unmanned aircraft systems (UAS) are substantial. Technology has moved forward rapidly, and what used to be considered toys are quickly becoming powerful commercial tools that can provide enormous benefits in terms of safety and efficiency. UAS integration will have a significant positive economic impact in the United States. Whether UAS are performing search and rescue missions, allowing farmers to be more efficient and environmentally friendly, inspecting power lines and cell towers, gathering news and enhancing the public's access to information, performing aerial photography to sell real estate and provide insurance services, surveying and mapping areas for public policy, delivering medicine to rural locations, providing wireless internet, enhancing construction site safety, or more— society is only just beginning to realize the full potential of UAS. UAS technology is already bringing substantial benefits to people's daily lives, including cheaper goods, innovative services, safer infrastructure, recreational uses, and greater economic activity. Inevitably, creative minds will devise many more UAS uses that will save lives, save money and make our society more productive.

However, the very characteristics that make UAS so promising for commercial and noncommercial uses, including their small size, maneuverability and capacity to carry various kinds of recording or sensory devices, can raise privacy concerns. As a result, individuals may be apprehensive about the adoption of this technology into everyday life. In order to ensure that UAS and the exciting possibilities that come with them live up to their full potential, operators should use this technology in a responsible, ethical, and respectful way. This is some of the future uses and our equine will be encountering drones not only in their current living locations and could encounter them on the trail.

Additionally, Drones have been used to and will have major increase when involved with:

1. Mapping current trails.
2. Inspect current conditions of trails.
3. Locate and obtain the exact coordinates of areas that are in needed repair or improvement.
4. Help locate the best possible locations and routs when developing new trails.
5. Help search and rescue groups when looking for missing trail users.
6. Assist emergency response and/or rescue personnel when dealing with mass destruction areas, natural disasters to including safety and rescue responses needed.