SAFE DRONE OPERATIONS

Know the Rules for Compatible Flights

Drone operations near Youngstown Air Reserve Station (YARS) can create air safety and security concerns for the military due to the potential for mid-air collisions and the visual access that overhead flight provides. Managing the increasing number of commercial and private operations has become an important part of compatible land use.

What are Drones?

Drones are unmanned aircraft remotely controlled by ground-based operators using wireless communication systems. Drones are also called "unmanned aerial systems" (UAS) and come in a variety of shapes and sizes and for different functions. The military uses highly sophisticated drones from hand-held to full, aircraft-sized and for purposes ranging from surveillance and reconnaissance to tactical and offensive. Fixed-wing drones are modeled after traditional aircraft and are more commonly used in military applications. Certain fixed-wing designs can travel much farther and carry much more substantial payloads.

Civilian drones are typically much smaller than military drones and are most commonly used for recreational, commercial, or educational purposes. Most civilian drones are multi-rotor designs that use helicopter-style rotors to lift and propel the aircraft and usually have short- to medium-range capabilities. They can carry small loads like cameras for short distances, adding to their functionality. Some common commercial uses for these types of drones are land survey, aerial photography, and disaster relief support.

Why is Youngstown ARS Concerned About Drones?

Drone operations near military installations create two primary concerns for the Air Force — safety and security. Operating drones near YARS, as well as Youngstown-Warren Regional Airport, poses safety risks to pilots, passengers, and the general public due to the potential for aerial collisions and crashes. Drones flown too close to or over YARS also pose security risks, as it is unknown if they will be used to record operations, other activities, or conversations or if they are carrying harmful materials or weapons. These uses may or may not have nefarious intent but threaten installation security, regardless.

A Department of Defense (DoD) policy instituted in 2017 grants military installations the authority to track, disable, and destroy drones determined a threat to an installation or military mission. YARS uses various methods to manage drone threats.

Local Drone Regulations

The State of Ohio authorizes municipal governments to adopt drone regulations as part of policing powers to protect public, health, safety and welfare. As part of the implementation of the Youngstown ARS Military Installation Sustainability project a Drone Ordinance was drafted for municipalities to adopt. Check with your local government whether there are drone regulations for your community.

The FAA has also developed several resources for both communities and operators to promote the safe use of drones. For local communities, the FAA developed a "No Drone Zone" awareness package that includes graphics and other tools to help identify areas in which drone operations are restricted.

Ohio Drone Regulations

Drones are allowed in Ohio for recreational and commercial use, subject to compliance FAA regulations and flight controls. There are no state laws regulating the use of drones in Ohio; however, municipalities are allowed to adopt local regulations regarding the use of drones and some cities such as Cleveland and Celina have adopted citywide drone laws.

Federal Drone Regulations

The Federal Aviation Administration (FAA) regulates drone usage to ensure they do not interfere with aircraft operations. FAA regulations limit the use of drones within five miles of large and medium-sized airports and in security-sensitive airspace. Security-sensitive airspace includes airspace over military installations, national landmarks, and critical infrastructure such as power plants and transmission lines. The regulations have two categories of drones: under 55 pounds and over 55 pounds. The Unmanned Aircraft Systems Rule (14 CFR, Part 107), referred to as the Small UAS Rule, regulates drones under 55 pounds.

To operate larger drones, an exemption from the 55-pound weight restriction must be obtained under Special Authority for Certain Unmanned Systems (49 U.S.C. 44807).

Some of the basic operator requirements for drones under 55 pounds are shown below. The FAA may grant a waiver for most restrictions if the operator can show a level of safety to support the waiver prior to flight. Waivers may be requested at https://www.faa.gov/uas/commercial_operators/part_107_waivers.

Operators must maintain a visual line of sight while operating a drone

Drones must be registered with the FAA before flight

Operators must have a remote pilot certification *or be overseen by someone with such certification*

Operators may not fly more than one drone at a time

Operators must receive permission before flying closer than five miles to an airport

Drones may not fly higher than 400 feet above ground level

Drones may not fly at speeds greater than 100 miles per hour

Drones must yield to manned aircraft and remain clear from their flight path

Drones must avoid adverse weather conditions with high winds or reduced visibility

Drones and operators must meet certain criteria to fly at twilight or night

Operation of drones under the influence of drugs/ alcohol manner is prohibited

FAA strongly recommends flying at least 1,500 feet from guy lines and electrical transmission lines

What are the federal regulations that apply to different drone users?

There are four general categories of drone flyers: recreational flyer/modelers, certified remote pilot/commercial operators, public safety or government users, and educational users.

Recreational Flyer/Modelers

Recreational flyers use drones and model aircraft for personal enjoyment, typically under a limited statutory exception from Part 107 that imposes a less restrictive set of requirements. Recreational flyers pilots are encouraged to take and pass the Recreational UAS Safety Test (TRUST) and to carry proof of successful testing when flying. The limited exception applies only to flights that are purely for fun or personal enjoyment. When in doubt, fly according to Part 107 regulations.

Certified Remote Pilot/ Commercial Operators

Businesses, commercial enterprises, and non-profit organizations that fly drones weighing less than 55 pounds fall under this category. A Part 107 Remote Pilot Certification is required, and the drone must both be registered with the FAA and display its registration ID.

Public Safety or Government Users

Government agencies (local, state, tribal, and federal), law enforcement, and public safety organizations that operate drones under 55 pounds fall in this category. Drone operations must adhere to Part 107, as well as the statutory requirements for public aircraft (49 U.S.C. 40102(a) and 40125). To support first responders and other entities affiliated with them, the FAA can quickly issue authorizations for natural disaster response and other emergency needs.

Educational Users

Drones (and model aircraft) are useful educational tools, and if a teacher or a student uses a drone as part of a curriculum they are classified under this category. The educational user can operate under recreational flyer regulations for educational and research use. This classification applies to institutions of higher education, programs run by JROTC, and educational programs chartered by recognized community-based organizations.

Maximum Drone Flying Heights and FAA Notification Area around YARS and the Youngstown-Warren Regional Airport

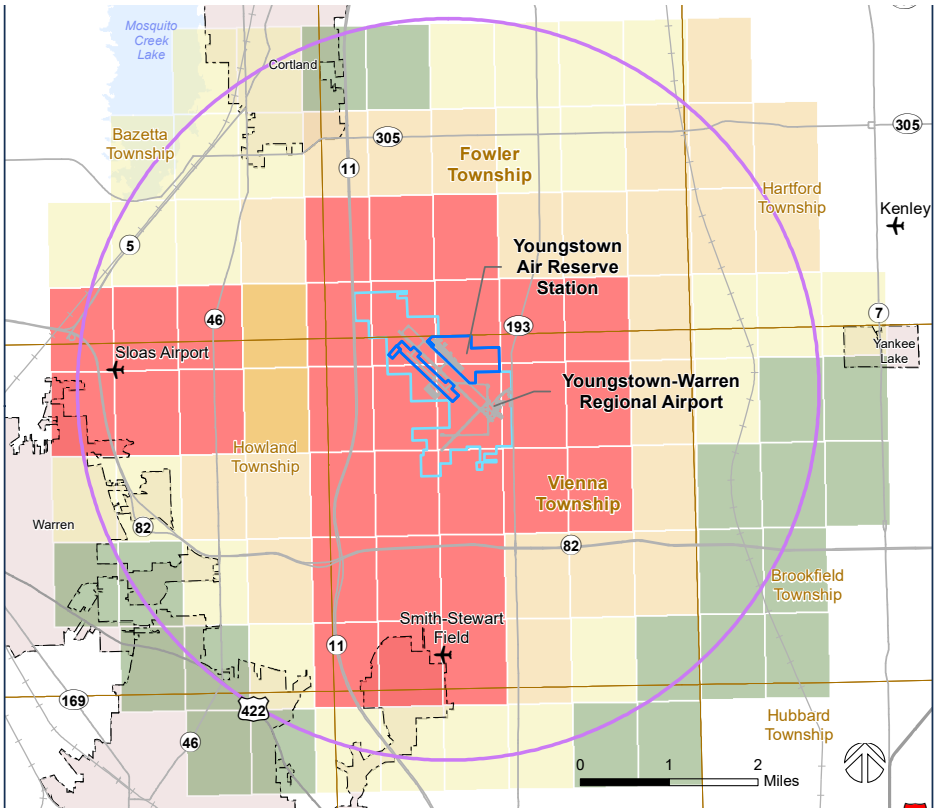
Legend

5 Mile FAA Drone Notification Area

Drone Ceiling Altitudes

- 0 ft
- 100 ft
- 200 ft
- 300 ft
- 400 ft

- Youngstown ARS
- Youngstown-Warren Regional Airport
- County
- Township
- City



YARS ■ Safe Drone Operations

Tools to Help You

The FAA created the free **B4UFLY mobile app** that provides information and interactive maps to assist operators in knowing where they can and cannot fly. However, this app does not allow drone users to request or obtain authorization waivers to fly in controlled airspaces. The app includes five key elements:

- A "status" indicator showing whether or not it is safe to fly in the user's current location
- The ability to check whether it is safe to fly in other locations
- Airspace information and temporary flight restrictions or Notice to Air Mission (NOTAM)
- Informative, interactive maps
- Links to other FAA drone resources and regulatory information

For those who seek clearance to operate a drone in controlled airspace, the FAA has created the **Low Altitude Authorization and Notification Capability (LAANC)** program, which directly supports the integration of drones into public airspace. With this app, users can check local restrictions, view all controlled airspace and flight altitude restrictions, and submit applications and receive approval for airspace use authorization. There are other LAANC-connected applications such as Aloft and AirHub Launch that can be used to obtain flight authorization.

Additional Resources

B4UFLY	https://www.faa.gov/uas/getting_started/b4ufly
FAA	https://faadronezone-access.faa.gov/#/
FAA DroneZone	www.faa.gov/uas
KNOW BEFORE YOU FLY	https://knowbeforeyoufly.org
LAANC CONNECTED	https://www.faa.gov/uas/programs_partnerships/data_exchange
Aloft	https://www.aloft.ai/feature/laanc/
AirHub Launch	https://airspacelink.com/laanc-for-pilots

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