

**Public Safety & Transportation Committee Agenda City of Newton
In City Council Wednesday, November 9, 2016**

ITEM # 197-15(2): DRAFT ORDINANCE FOR DISCUSSION PURPOSES

Add the following new section:

Sec. 20-64. Pilotless Aircraft Operation.

Purpose: The use of pilotless aircraft is an increasingly popular pastime as well as learning tool. It is important to allow beneficial uses of these devices while also protecting the privacy of residents throughout the City. In order to prevent nuisances and other disturbances of the enjoyment of both public and private space, regulation of pilotless aircraft is required. The following section is intended to promote the public safety and welfare of the City and its residents. In furtherance of its stated purpose, this section is intended to be read and interpreted in harmony with all relevant rules and regulations of the Federal Aviation Administration, and any other federal, state and local laws and regulations.

The Academy of Model Aeronautics (AMA) is seeking an exemption for AMA remote pilots from Newton's proposed pilotless aircraft registration process and flight operations that exceed the weight limits of 55 lbs. and altitudes above 400 ft. AGL.

AMA exemption would apply only at AMA permitted flying sites and for AMA remote pilots operating in accordance with AMA's extensive safety programming and FAA's authorization.

AMA remote pilot membership registration will be verifiable online 24 hours and 7 days a week for Newton law enforcement to check against pilot's aircraft marking address label. AMA's 39 Massachusetts clubs and their flying sites, club officer, and event information will be made available online.

AMA will also make available free novice non-member remote pilot flight training and insurance in the amount of \$500,000 + for 60 consecutive days from the day training starts at participating Massachusetts AMA flying sites.

(1) **Definitions:**

Pilotless Aircraft – an unmanned, powered aerial vehicle, weighing less than 55 pounds, that is operated without direct human contact from within or on the aircraft.

AMA opposes including all unmanned powered aircraft under 55 lbs. in the definition of pilotless aircraft without a lower weight limit of 8 ounces (0.55 lb.) for toy model aircraft as defined by the FAA. There is no valid reason to register a rubber powered balsa model aircraft that cost \$1.79 and pay a registration fee of \$10.

(2) **Registration:** Owners of all pilotless aircraft shall register their pilotless aircraft with the City Clerk's Office, either individually or as a member of a club, as follows:

AMA opposes local sUAS registration requirements when a state or municipality doesn't seek and acquire FAA approval. Approval is required by FAA in its document, "State and Local Regulation of Unmanned Aircraft Systems" Dec. 17, 2015, wherein the document states that "*no State or Local government may impose an additional registration requirement on the operation of Unmanned Aircraft in navigable airspace without first obtaining FAA approval.*"

sUAS Registration regulations by the City of Newton would be subject to FAA preemption and legal challenge.

AMA members have for decades included a label with their name and contact information in each of their model aircraft and members now also have FAA registration marking on each of their aircraft.

AMA membership can be verified online 24/7. FAA is currently in the process of speeding up its responses on contact information to law enforcement on registration numbers. AMA was told that FAA sUAS registration inquiries from law enforcement may soon be accessibly electronically.

(a) **Individual Registration:** Individual owners of pilotless aircraft shall register each pilotless aircraft with the City Clerk's office, prior to operation. The cost of registration shall be \$10.00 per Owner and such cost of registration shall include all pilotless aircraft owned by the Owner. Owners must have proof of registration in their possession when operating a pilotless aircraft. Registration shall include the following:

- (i) The owner's name, address, email address and phone number;
- (ii) The make, model, and serial number, if available, of each pilotless aircraft to be registered;
- (iii) A copy of the Owner's Federal Aviation Administration Certificate of Registration for pilotless aircraft;

(b) **Club Registration:** Members of a pilotless aircraft hobby club may register their pilotless aircraft through a responsible adult member of the Club. Each Club shall be issued a single identifying registration number by the City Clerk's Office to be affixed to each pilotless aircraft belonging to members of the Club. The cost of Club Registration shall be \$10 per Club and the cost of registration shall include all members of that Club. The responsible adult member shall update the Club's roster of members with the Clerk's office on an annual basis. All other requirements of Section 2(a)(i-iii) shall apply to Club registration.

AMA also opposes registration because it has so many burdensome requirements that it becomes exclusionary and may well prevent youth participation in an aeromodelling hobby whose STEM education and participation has resulted in aeronautical and scientific career path for many people.

The AMA provides free membership to youth members under 19 years of age. Newton's \$10 registration would likely make many either not comply with Newton's ordinance or not engage in the hobby nor acquire the learning benefits of participation. AMA has provided over a million dollars of scholarship aid to AMA youth pilots. In New England, this year, AMA youth member Tyler McCormack received a \$9,000 college scholarship from the AMA.

(3) **Operating Prohibitions.** The use and operation of all pilotless aircraft within the City shall be subject to the following prohibitions.

- (a) No pilotless aircraft shall be operated:
 - (i) over private property at an altitude below 400 feet without the express permission of the owner of said private property;
 - (ii) at a distance beyond the visual line of sight of the Operator;
 - (iii) in a manner that interferes with any manned aircraft;

- (iv) in a reckless, careless or negligent manner;
- (v) over any school, school grounds, or other City property or sporting event without prior permission from the City, unless a permit is required as in Section 4, below;
- (vi) for the purpose of conducting surveillance unless expressly permitted by law or court order;
- (vii) for the purpose of capturing a person's visual image, audio recording or other physical impression in any place where that person would have a reasonable expectation of privacy;
- (viii) over any emergency response efforts;
- (ix) with the intent to harass, annoy, or assault a person, or to create or cause a public nuisance;
- (x) in violation of federal or state law, or any Ordinance of the City of Newton.

(b) The Chief of Police, or designee, may prohibit the use or operation of pilotless aircraft where it is allowed, or allow the operation of pilotless aircraft where it is prohibited, during an impending or existing emergency, or when such use or operation would pose a threat to public safety.

(4) Permit May be Required:

(a) Individual Permits: A permit may be required to use land maintained by the Parks and Recreation Department, or by any other Department or Commission of the City, to launch or land a pilotless aircraft. Such permits may be issued by the Parks and Recreation Department Head, or designee, or the City entity charged with managing the property, or designee. Individual operators shall adhere to the registration requirements of Section 2 above.

(b) Event Permits: The Parks and Recreation Department, or any Department or Commission charged with managing land owned by the City, may issue Permits for groups and special events. Such Event Permits will be issued to a responsible person who will insure that all operators participating in the event adhere to the requirements of this ordinance, except that individual participants in an event under this subsection are not required to register in accordance with Section 2.

(5) Noise Ordinance: All Operators shall comply with the Noise Ordinance at Section 20-13, as amended, at all times while operating pilotless aircraft within the City.

(6) Penalties: A violation of any section of this Ordinance shall result in a warning for the first offense and shall be punishable by a fine of \$50.00 for each offense thereafter.

(7) Separate Violations: Action taken pursuant to this section shall not bar any separate action by any other City Department for any other violations.

(8) Severability: If any provision of this section is held to be invalid by a court of competent jurisdiction then such provision shall be considered severable from the remaining provisions, which shall remain in full force and effect.

(9) Regulations: The City and its Departments may promulgate rules, regulations and policies for the implementation of this Ordinance.

PILOTLESS AIRCRAFT FAQs - The following Frequently Asked Questions are intended to help pilotless aircraft operators understand the requirements contained in the City of Newton's ordinance.

As many are aware, pilotless aircraft technology has advanced at a rapid pace so that pilotless aircraft are now commonly used for commercial purposes and as an everyday hobby for individuals of all ages. The challenge for the City of Newton, with its unique blend of both urban and suburban environments, is to create a framework that permits all pilotless aircraft users to engage with this new and exciting technology, while providing for the safety and security of all residents. The purpose is to allow the use of pilotless aircraft technology in a way that minimizes the possibility of damaging public and private property or creating a nuisance for our neighbors.

To accommodate the interests of every resident, various departments of the City have worked together to create a registration and permitting process that allows for the safe operation of pilotless aircraft. These FAQs provide standards for good practices to use while flying your pilotless aircraft. The ordinance is premised on the general rule that you should always operate your pilotless aircraft in a safe and careful manner and be aware of your surroundings.

These FAQs will be updated, as needed, to reflect any changes in the FAA's regulations, state or federal law that may affect the operation of your pilotless aircraft.

I already registered my pilotless aircraft with the FAA, why do I have to register again?

- The Newton registration process includes this educational component that will help owners and operators better understand how and where to fly pilotless aircraft in a safe and careful manner. Registrants will have access to ongoing updates in the law through the clerk's office.

In terms of providing basic drone education during a registration process, it is provided when a person registers with the FAA and safety guidelines are printed with the registration. FAA registration is done online and no photos are necessary nor does it require registering rubber powered toy airplanes.

[AMA remote pilots receive remote pilot flight training at AMA chartered clubs by experienced club flight instructors. Many clubs also participate in AMA's Introductory Pilot Program, where a non-AMA member may fly at a club site and receive member liability insurance protection while under the direct, one-on-one supervision of an Intro Pilot Instructor, for a period of 60 consecutive days. Learning UAS flight operation best practices in AMA club's mentoring environment, provides remote pilots with continued training while progressing from flying entry level sUAS to advanced UAS. Maintaining AMA pilot's exemplary flight safety record helps to preserve AMA's 336 exemption by Congress and the FAA.](#)

- Newton has created and will maintain a local database for enforcement of its Ordinance.
- The registration process in Newton includes some information that the FAA does not require, in order to assist law enforcement with tracking pilotless aircraft to their operators. This information includes the requirement to provide a property address, phone number, and the serial number of each pilotless aircraft to be registered. The City of Newton also requires pilotless aircraft operators to register pilotless aircraft that weigh less than 0.55 pounds, even though the FAA does not.

Does the FAA also regulate pilotless aircraft?

- Yes, it does.
- The FAA regulates any aircraft that operates in navigable airspace, which can include pilotless aircraft.

- In general, the FAA is concerned with protecting public safety, and focuses its regulations on aircraft that operate above 400 feet and that share the airspace with airplanes and helicopters, and the FAA allows cities and towns to regulate pilotless aircraft that fly below 400 feet.

The above statement about the FAA’s authority over the National Air Space (NAS) being focused on altitudes above 400 ft. AGL and allowing cities to regulate pilotless aircraft that fly below 400 ft. AGL **is not correct**. The FAA received directives from Congress in the 2012 FMRA to safely integrate sUAS into the National Airspace (NAS). The vast majority of sUAS flights for public, commercial, and recreational applications take place in Class G uncontrolled airspace where many millions of sUAS will be flying between 200 ft.– 400 ft. AGL. There is much less activity in large UAS flights for military, scientific, and surveillance purposes taking place above 500 ft. AGL.

Please Refer to FAA document titled “*State and Local Regulation of UAS*” December 17, 2015
The document essentially informs legislators that the FAA views its authority to regulate UAS safety and operations in the NAS as pervasive and exclusive. Jim Williams, the recently retired Director of the FAA UAS Integration Office, has stated many times that the FAA considers the airspace one millimeter above someone’s lawn to be the national airspace subject to federal government regulation.

States or local government do not have the authority to regulate drone operations in the NAS and courts have held that the U.S. government by statute “has exclusive sovereignty” of the NAS and any state or local statutes would be preempted by FAA regulations. Fractionalized control of the navigable airspace could result in a patchwork quilt of differing restrictions that could severely limit the flexibility of FAA in controlling the airspace and flights of unmanned aircraft.

- The City of Newton ordinance only regulates pilotless aircraft that fly under 400 feet, in the airspace that the FAA permits cities and towns to oversee.

Do all pilotless aircraft need to be registered?

- The FAA requires you to register your pilotless aircraft if it weighs more than 0.55 pounds and less than 55 pounds. Currently, the City of Newton will require registration of all pilotless aircraft under 55 pounds.
- In Newton, all pilotless aircraft, including small pilotless aircraft under 0.55 pounds must be registered with the City Clerk’s office.
- After registration, all owners are required to update the Clerk’s office with information about any new pilotless aircraft that are acquired.

What if I don’t live in Newton – will I still have to register my pilotless aircraft?

- Yes, every pilotless aircraft operated within the City of Newton will be required to be registered with the Clerk’s office, either individually or through membership in a hobby club.
- EXCEPT - For special events, like races or group demonstrations, a responsible person may be given a permit from the Parks and Recreation Department or other department or commission that manages the City land, which would allow unregistered owners to operate pilotless aircraft within the City for that event.

Where can I fly my pilotless aircraft?

- An owner can operate their pilotless aircraft on their own property.

- Pilotless aircraft can be operated on private land with permission from the landowner if the pilotless aircraft is flown below 400 feet.

AMA remote pilots have flown model aircraft at altitudes above 400 ft. AGL for 80 years. Altitudes above 400 ft. AGL are often done when flying larger or faster model aircraft that require the additional altitude to perform and recover from aerobatic maneuvers and to provide additional safe separation distances from the ground and people especially when someone is learning to fly. The pilot must have clear visibility of the aircraft and its surroundings and use a spotter to provide additional situational awareness to avoid flying in proximity to manned aircraft. AMA remote pilots fly at permitted open space locations so as not to create a hazard to people, property or manned aircraft.

FAA reaffirmed AMA's remote pilot's authority to fly at altitudes above 400 ft. AGL in writing on July 7, 2016 in a letter from Earl Lawrence FAA Director of the UAS Integration Office stating that *"model aircraft may be flown consistently with section 336 and agency guidance at altitudes above 400 ft. AGL when following a community-based organizations safety guidelines. A CBO such as the AMA may establish limitations in their safety guidelines that exceed the FAA's 400 ft. AGL recommendations."*

AMA's more comprehensive and special operational requirements for multiple types of UAS, mitigate higher risk operations allowing AMA members to exceed UAS operational limitations of non-members of a community based organization. Examples include, flying at altitudes above 400 ft. AGL, exceeding speeds of 100 mph, operating UAS weighing over 55 lbs. and night flying.

FAA Authorized – Congress and the FAA on August 29, 2016 codified into law the "Special Rule for Model Aircraft" operations for members of a community based organization (CBO) or AMA. It preserves Public-Law 112-95 Sec. 336 (c) from 2012, exempting AMA members from the promulgation of additional FAA UAS rules and allows AMA to continue to provide rules for its members to operate safely and responsibly in the NAS.

- Pilotless aircraft can be operated on public land with permission. Sometimes a permit may be required from the Parks and Recreation Department. In order to obtain a permit to fly a pilotless aircraft on public land, please contact the Parks and Recreation Department. The Parks and Recreation Department will allow the flying of pilotless aircraft where there is sufficient space to operate on public land. Locations and times will vary depending on the time of year in order to allow for various types of recreation activities for all members of the public.
- Operation of pilotless aircraft is prohibited over any school, City property, or sporting event without prior permission from the City.
- Pilotless aircraft may not be operated over any emergency response situation.

How do I get a permit to launch or land my pilotless aircraft from public property in Newton?

- Contact the Parks and Recreation Department via telephone at 617-796-1500 or via email at parks@newtonma.gov. To find the Parks and Recreation policies about where and when pilotless aircraft can be flown, visit their website at <http://www.newtonma.gov/gov/parks/default.asp>

What is a Federal No Fly Zone?

- According to the FAA regulations, there are no-fly zones where pilotless aircraft are prohibited. These federal no-fly zones include restricted or special use airspace, stadiums and sporting events including MLB, NFL, and NCAA Division One Football, wildfires, airports, and emergency response efforts.

- Within 5 miles of an airport, the FAA requires notification to the airport operator and control tower prior to operation. For exact locations on where you are not allowed to fly your pilotless aircraft, there are several informative mobile phone applications available on the market.

Are there any Federal No Fly Zones in Newton?

- No Fly Zones include: national parks, military bases, and within 5 miles of any medium or large sized airport.
- Currently there are no existing Federal No Fly Zones in Newton, but the Newton Ordinance imposes its own restrictions on where pilotless aircraft may be flown.

May I fly my pilotless aircraft at night?

- For commercial pilotless aircraft, the FAA has limited flying to daylight only operations or civil twilight (30 minutes before sunrise and 30 minutes after sunset).
- For hobby pilotless aircraft, the FAA currently requires that they be flown within the visual line of sight of the person operating the aircraft, without a spotter. This means that the operator must be able to use his/her natural vision to see the aircraft at all times. The operator may not use vision-enhancing devices such as binoculars or night vision goggles to satisfy this requirement. If the pilotless aircraft is not visible at night, it may not be operated at night.

*The first sentence in the above paragraph needs a correction. Hobby flown pilotless aircraft most all be flown within visual line of site (VLOS) of their remote pilot **with or without** a spotter or observer providing additional situational awareness of the surrounding sky.*

- In addition, the City of Newton Ordinance prohibits operating any pilotless aircraft in a reckless, careless and negligent manner. Operators are cautioned to be aware of their surroundings at all times, especially at night when power lines, tree branches and other obstacles may not be visible. Operators are expected to use common sense in order to prevent creating a nuisance or annoyance in close proximity to other people.

Will the FAA issue fines for operation of pilotless aircraft?

- The FAA can issue fines and have done so in cases where people have carelessly and recklessly operated pilotless aircraft in an unsafe manner in the airspace in the jurisdiction of the FAA. The FAA may assess civil penalties up to \$27,500 for not registering your pilotless aircraft and criminal penalties of up to \$250,000 in fines and/or three year imprisonment. However, there are no set standards for administering fines. The FAA will consider the nature of the violation.

A review of the FAA citations issued for violations in the operation of sUAS or pilotless aircraft to date, flown by recreational remote pilots, reveals that no AMA remote pilots have been cited for violations. Those hobbyists cited and fined for carless and reckless flying etc. were all non-members of the AMA or a community based organization.

- The City of Newton will give an offender a warning for the first offense and then a \$50.00 fine for each subsequent offense that violates the Ordinance.

Am I able to audio record with my pilotless aircraft?

- According to the Massachusetts wiretap statute (M.G.L c. 272 §99), a person may not secretly record any oral communications or conversations with the use of a device. The statute does not distinguish between public and private oral communications, so even speech in public can be considered private and not available to record, without permission

What is the price of registration?

- Registration with Newton is \$10 per owner, and registration with the FAA is \$5.
- Members of a Hobby Club may register through a responsible adult member of their club, and the cost of such club registration is \$10 per club. The \$10 registration fee will cover all members of the Club.

Am I required to renew my registration with the City of Newton?

- Yes. Just like the FAA's registration requirement, individuals are required to renew their registration with the City every three years.
- The responsible adult for a Club membership is required to renew registration every three years. In addition, the responsible adult for a Club membership is required to update the roster of members on an annual basis with the Clerk's office.

Is there a limit on the number of pilotless aircraft I can register with Newton?

- No, as long as every pilotless aircraft you own is registered with the City, either individually or through membership with a Club, there is no limit on the number that one person is allowed to register.

Are there any useful pilotless aircraft applications for my mobile phone?

- There are many useful apps on the market that show No Fly Zones and provide helpful information about safe operation of pilotless aircraft.

How do I register my pilotless aircraft if it doesn't have a serial number because it is homemade?

- Owners of home-made pilotless aircraft can provide as much information as possible to the Clerk's office, and the Clerk will issue an appropriate registration number.