

IDEAS FOR AIRPORTS DEALING WITH NEARBY MODEL DRONE/UAS OPERATIONS¹

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Unmanned Aircraft Systems (UAS) represent a disruptive technology. UAS innovations will allow people to do things in that were impossible in the past. The FAA estimates that UAS sales in the U.S. in 2016 will be almost 2.5 million; with sales exceeding 7 million per year by 2020.

The UAS laws are not clear or consistent concerning (1) how airports should be notified about nearby UAS operations, (2) how they should handle such notices, and (3) how they should reach agreements with local model UAS operators about appropriate procedures. This article will discuss various problems associated with this vague area of the law.

The issue of UAS operations near airports is governed, in part, by Section 336 of the federal 2012 FAA Reform and Modernization Act. Section 336 of the Act states:

When flown within 5 miles of an airport, the operator of the model aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation (model aircraft operators flying from a permanent location within 5 miles of an airport should establish a mutually agreed upon operating procedure with the airport operator . . .).

This part of the law governs only "model" (i.e., hobby or recreational) UAS operations. Section 336 does not apply to commercial ("civil") or governmental ("public") UAS operations.

The FAA recently made available a free smartphone app to help hobby UAS operators determine whether their flying will be within 5 miles of an airport or heliport. Information about the app, called B4UFLY, can be found at: <https://www.faa.gov/uas/b4ufly/>. All persons interested in UAS operations should install the app and learn how to use it.

Commercial UAS operations near airports are subject to a much different set of rules. Until the FAA implements a comprehensive set of specific UAS regulations, commercial UAS operations are only permitted if the user applies for and receives a "333 Exemption." (See https://www.faa.gov/uas/legislative_programs/section_333/ for more information about these exemptions.) For commercial UAS operations near airports, the typical 333 Exemption states: ***"The UA may not operate within 5 nautical miles of an airport . . . unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder."***

Notice how different these rules are. Commercial UAS operations near airports are prohibited unless the operator has a letter of agreement or a COA. Model/hobby UAS operations near airports involve just "notice" and, possibly, some "agreed upon operating procedures."

Members of the aviation community need to know that the 2012 Act seriously restricts the FAA's ability to govern model/hobby UAS activities. The Act states: "***the Administrator of the Federal Aviation Administration may not promulgate any rule or regulation regarding a model aircraft, or an aircraft being developed as a model aircraft, if . . .***" Model/hobby UAS operations are off limits from FAA regulation if the aircraft is: (1) flown strictly for hobby or recreational use; (2) operated in accordance with a community-based set of safety guidelines; (3) 55 pounds or less; (4) operated in a manner that does not interfere with and gives way to manned aircraft; and (5) notice to airports is given as mentioned above.

In June 2014, the FAA issued its legal interpretation of section 336 of the 2012 Act. Concerning mode/hobby UAS operations near airports the FAA said:

If the model aircraft operator provides notice of forthcoming operations which are then not authorized by air traffic or objected to by the airport operator, the FAA expects the model aircraft operator will not conduct the proposed flights. The FAA would consider flying model aircraft over the objections of FAA air traffic or airport operators to be endangering the safety of the NAS [National Airspace].

What does this mean? Can an airport manager prevent a model/hobby UAS pilot from flying near the airport? The answer is "NO." The airport manager can "object," but he/she cannot prohibit any UAS flying near the airport; no matter how dangerous it appears.

The FAA website has a page dedicated to Q&As for hobby UAS operations near airports:

(http://www.faa.gov/airports/special_programs/uas_airports/model_airplane_faqs/) For members of the aviation community involved in airport operations, it seems that the FAA guidance has some serious problems.

In the next section of this article I have included the FAA's questions and most of its answers pertaining to airports and model/hobby UAS operations. For each of the FAA's questions and answers, I offer my comments. Here we go:

FAA Question No. 1. What rules apply to model aircraft use near an airport?

FAA Answer:

Section 336 of Public Law 112-95 established the following criteria for model aircraft operations:

- Flown in accordance with a community-based set of safety guidelines and within the programming of a nationwide community-based organization (CBO);
- Flown in a manner that does not interfere with, and gives way to, any manned aircraft; and
- When flown within five statute miles of an airport, the operator of the model aircraft provides the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport) with prior notice of the operation. Model aircraft operators flying from a permanent location within five statute miles of an airport should establish a mutually agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport).
- Model aircraft must be operated within the visual line of sight of the operator using only eyeglasses or contact lenses as aids.

The FAA recommends model aircraft operators limit operations to at or below 400 feet above ground level (AGL). Model aircraft are prohibited from operating in Prohibited Areas, Special Flight Rule Areas or the Washington National Capital Region Flight Restricted Zone, without specific authorization. Additionally, model aircraft operators should be aware of other Notices to Airmen (NOTAMs) that address operations near locations such as military or other federal facilities, certain stadiums, power plants, electric substations, dams, oil refineries, national parks, emergency services, and other industrial complexes.

RAK Comments: The "prior notice" rule seems to be more of the **start** of a problem; rather than a **solution**. Implied in the rule is the idea that model/hobby UAS pilots operating near airports represent a potential risk to aviation safety. The risk, obviously, is that unmanned aircraft will interfere with, or even collide with, manned aircraft. What is the manager of a non-tower airport (including both public and private airports) supposed to do with a model/hobby pilot's notice of operation? Being put on notice of a potential safety problem near the airport; how should the airport respond? What if the unmanned aircraft does collide with a manned aircraft using the airport or flying near the airport? Could the airport be accused of being negligent and held liable for the way the airport handled -- or failed to handle -- the model/hobby pilot's notice?

FAA Question No. 2. Is model aircraft use prohibited within five statute miles of an airport?

FAA Answer:

There are no legislative prohibitions. However, Section 336 of Public Law 112-95 requires the operator of the model aircraft to notify the airport operator and airport traffic control tower (if one is located on the airport) prior to operating within five miles of an airport. For ease in determining distances, the FAA interprets this as five statute[5] miles from an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart. Please note that model

aircraft operators must also comply with the requirements of the airspace where they intend to fly the model aircraft. Please refer the model aircraft operator to the local airport traffic control tower, if one is located at the airport, for specific questions on airspace operating requirements.

RAK Comments: The answer to this question, despite the large number of words used, is really very simple: NO; an airport cannot prohibit any model aircraft operations anywhere with 5 miles of the airport. In other words, the law requires that airports receive notice of a potentially dangerous situation nearby, but they can't do anything to stop it from happening.

FAA Question No. 3. What procedure should I follow for a permanent model aircraft flying location that is within five statute miles of my airport?

FAA Answer:

Section 336 of Public Law 112-95 states that:

“Model aircraft operators flying from a permanent location within five statute miles of an airport should establish a mutually agreed upon operating procedure with the airport operator and the airport air traffic control tower (when an air traffic facility is located at the airport).”

A best practice for the airport operator is to enter into a letter of agreement (LOA) with the model aircraft operator, or operator’s outlining the airport operator’s understanding of how the model aircraft will be operated within five statute miles of the airport. This LOA could include:

- The type of model aircraft being used,*
- Parameters for the flight (altitude and locations)*
- Anticipated Times for flight*
- The safety guidelines the model aircraft operator will use, and*
- Notification procedures to the airport operator, if any.*

A benefit to the airport operator for establishing a “mutually agreed upon operating procedure” is that the agreement could eliminate the need for the model aircraft operator calling the airport each time they fly, which is a requirement under Section 336. This is because the LOA described above would include a mutual understanding of how the model aircraft would be operated.

The Model Aircraft operator, or operators, should contact the airport traffic control tower if one is located at the airport to also establish and LOA with the ATCT.

RAK Comments: The law itself is quite vague. Take note of the word "**should.**" There is no legal requirement that any model/hobby pilot actually establish any "mutually agreed upon operating procedures" with a nearby airport. The Act does not say "shall" or "must." It merely

says "**should.**" How can such a law be enforced? Can the FAA force a model/hobby UAS pilot to negotiate in good faith to sign a reasonable LOA with a nearby airport? It doesn't seem so.

Also, note that the legal *suggestion* applies only to model/hobby operators flying from a "**permanent location.**" What does that mean? We must recognize that UAS equipment is extremely portable. In other words, even if a model/hobby UAS pilot does enter into an agreement with a local airport for operating procedures, all the hobbyist needs to do to be free of the agreement is to fly from some other location -- still near the airport!

What about the FAA's suggestions for the terms to use in a LOA? Do you agree with the FAA's suggestions? Do you think there should be more terms? Less terms? What about insurance? What about loss link procedures? Should a model/hobby pilot flying near an airport follow the same procedures used for commercial operations? Should model/hobby pilots have more or less limits placed on their flying near airports than commercial UAS pilots? Does it (or should it) matter that most model/hobby pilots are probably unfamiliar with manned aircraft operations for near-airport maneuvers such as pattern entry and exiting, position reporting, take offs, landings, etc.?

FAA Question No. 4. Why am I getting a call from the operator of a model aircraft?

FAA Answer:

Section 336 of Public Law 112-95 requires the operator of a model aircraft to notify the airport operator when a model aircraft will be flown within five miles of an airport.

RAK Comments: It may be appropriate for the FAA to assume that model/hobby pilots are going to "call" the local airport to give notice of their flights. However, there is nothing in the law that says HOW the notice is to be given. In other words, notice could be given via email, regular mail; or even a note taped to the airport fence or the FBO door. Moreover, note that the law is completely silent on WHAT should be in the notice. In other words, a model/hobby pilot can leave a message such as: "HI, MY NAME IS JOE. I AM GIVING YOU MY NOTICE THAT I WILL BE FLYING MY DRONE NEAR YOUR AIRPORT A LOT THIS YEAR. THANKS."

Now the airport has the "notice" required by the law. Hence, the airport now has information suggesting that the area surrounding the airport is potentially less safe than it would be without the model/hobby operations. What should the airport do with this information? How should the airport manager gauge the risk? Does the airport have enough information about UAS risk to accurately make an informed judgement?

Note that I insist on calling the operator of the model UAS a "pilot." I think this is a key part of the discussion. I think it is wrong for the FAA to label these folks as "model operators." They are flying aircraft. They should be called pilots. Even though they are un-licensed pilots; they are pilots nonetheless. If a UAS crashes into a manned aircraft due to negligence on the part of the UAS operator, it should be called "pilot error." By calling these folks pilots, the significance of their use of the national airspace is put into the proper context.

FAA Question No. 5. What questions could I ask the operator of a model aircraft who proposes a flight within five statute miles of my airport?

FAA Answer:

- *What is your name and contact information?*
- *Where do you want to fly?*
- *At what altitude will you be flying (maximum)?*
- *What time will you be flying?*
- *How long will you be flying there?*
- *What are you flying (Make/ Model)?*
- *How can I contact you while you are flying?*

RAK Comments: Do you agree with the FAA that this is a good idea? Are airports going to be able to obtain this information 100% of the time? What about the times when the airport can't get this information? Do you agree that this is the proper list of questions? Is this list too long? Is it too short? What if the airport can get some, but can't get all of the information it would like to have? What should airports do with this information once they have it? Who really needs this information, the folks on the ground at the airport -- or the pilots of manned aircraft flying near the airport? How should airports plan on sharing this information about potentially dangerous activities with arriving and departing pilots? Are airports legally required to share this information with pilots of manned aircraft? If airports don't share it and a mishap occurs, can the airport be held liable? Does/should airport liability insurers have any expectations or guidelines for airports to follow for communicating with local model/hobby pilots?

FAA Question No. 6. What should I tell the operator of a model aircraft who proposes to fly near my airport?

FAA Answer:

- *Be familiar with the manned aircraft operating areas within five statute miles of the airport and share this information with the operator of the model aircraft.*
- *Based on the answers to the questions identified in Question 4 above, be able to describe to the model aircraft operator whether the proposed flight interferes with normal manned aircraft flight.*
- *Provide the model aircraft operator information on any special or unusual activity occurring at the airport during the proposed model aircraft flight (e.g., skydiving, low flying agricultural aircraft, helicopters, etc.).*
- *Remind the operator of model aircraft operating parameters (outlined in Question 1 above).*

- Ask the model aircraft operator to contact the air traffic control facility (if one is located at the airport).

- Ask the model aircraft operator to contact other airports that may also be within five statute miles of the proposed flight.

RAK Comments: Is this an appropriate and complete list of the information airport managers should be sharing with local model/hobby pilots? Is this list clear? Is it too long? Is it too short? Are airport managers going to be able to share all of this information with all of the model/hobby pilots who contact them? What about the times when the airport can't share this information? What if the model/hobby pilot isn't interested, doesn't care, doesn't have the time, or doesn't understand what the airport is trying to convey? What if the airport manager can't share all of the information he/she thinks the model/hobby pilot needs? What should the airport do if it fails to share this information with the model/hobby pilot? Does the airport have any obligation to let pilots of manned aircraft using the airport know that the airport has been unable to share information about the airport with a local model/hobby pilot? Are airports legally required to share this information? If an airport doesn't share it and a mishap occurs, can the airport be held liable? Does/should airport liability insurer have any expectations or guidelines for educating local model/hobby pilots?

Educating local model/hobby pilots on the topics listed by the FAA appears to be "easier said than done." How -- exactly -- are airports supposed to educate local model/hobby pilots about: (1) "the manned aircraft operating areas within five statute miles of the airport," (2) "whether the proposed [UAS] flight interferes with normal manned aircraft flight," or (3) "any special or unusual activity occurring at the airport during the proposed model aircraft flight (e.g., skydiving, low flying agricultural aircraft, helicopters, etc.)"? Is this sharing supposed to take a few seconds, a few minutes, or a few hours?

I find it particularly surprising that the FAA suggests that airport managers have some responsibility to tell local model/hobby pilots about the legal rules set forth in Section 336 of the 2012 Act. It is also surprising that the FAA suggests that airport managers should be educating model/hobby pilots about "normal" manned aircraft procedures, as well as any "special or unusual" flying near the airport.

What exactly is "normal" flying; and what should be considered "special or unusual"? Manned aircraft are not all the same. All pilots of manned aircraft do not fly the same way. Airports accommodate everything from ultralights, to warbirds, to business jets, to commercial airlines. Some pilots of manned aircraft are beginner students in very simple and slow aircraft such as Cessna 150s; while others have tens of thousands of hours experience flying the most sophisticated military and experimental aircraft imaginable. How is an airport manager supposed to properly explain all of this to a local model/hobby pilot?

FAA Question No. 7. How can I be prepared to discuss areas for model aircraft use within five statute miles of my airport?

FAA Answer:

A best practice is to coordinate with your stakeholders and air traffic control facility (if one is located at the airport) to identify areas within five statute miles of the airport where model aircraft would have the potential to interfere with manned aircraft flights. When describing these areas, consider describing areas of manned aircraft activity within five statute miles of the airport with regards to altitudes and locations in accordance with published flight information (e.g., traffic patterns, instrument approaches, departure areas, etc.). This facilitates the requirements of Section 336 of Public Law 112-95, which require that model aircraft be operated in a manner that does not interfere with manned aircraft flight. The airport operator and control towers are only identifying areas from an aviation safety perspective. It is the responsibility of the model aircraft operators to coordinate with landowners if they wish to operate from their property.

RAK Comments: The area within a 5 mile radius is almost 80 SQUARE MILES (over 50,000 acres). This FAA question and answer suggests that airport managers are supposed know a lot about potentially dangerous activities beyond the airport perimeter. This suggestion from the FAA would have airport managers create "*descriptions*" for local model/hobby pilots of areas around the airport "*where model aircraft would have the potential to interfere with manned aircraft flights.*" This text suggests that airport managers need to decide what areas are safer -- and what areas are less safe -- due to local model/hobby flying.

Remarkably, the FAA states that this work by airport operators actually, "***facilitates the requirements of Section 336 of Public Law 112-95, which require that model aircraft be operated in a manner that does not interfere with manned aircraft flight.***" I find this text surprising because Section 336 creates legal requirements for model/hobby pilots. Section 336 does not create legal requirements for airport managers.

FAA Question No. 8. Can an airport operator object to model aircraft flights near my airport?

FAA Answer:

Yes, according the FAA's Interpretation of the Special Rule for Model Aircraft, you can object to the proposed use of a model aircraft within five miles of an airport if the proposed activity would endanger the safety of the NAS. However, the airport operator cannot prohibit or prevent the model aircraft operator from operating within five miles of the airport.

If you object to a proposed model aircraft operation within five statute miles of the airport for safety reasons and the model aircraft operator flies anyway, the airport operator has the following options depending upon the airport operator's judgment of risk from the model aircraft flight:

- *Contact the airport traffic control tower (ATCT), if one is located at your airport.*
- *Contact your local law enforcement agency to detect and potentially investigate and, as appropriate, pursue enforcement actions to stop the use. Please refer to FAA Guidance for Law Enforcement.*

- Notify the FAA's 24 hours Regional Operations Center (ROC). Find ROC contact information.

- Notify the local Flight Standards District Office (FSDO).

RAK Comments: This question and its answer are *very important!* Even though airport managers cannot *prohibit* model/hobby flying near their airports -- they can object to such activities. To help protect their airport from potential liability, it may be a good idea for airport managers to establish policies for letting all local model/hobby pilots know that their airports do not and will not authorize any UAS activities within 5 mile of their airports. These objections can be published on the airport's website, and can shared directly with every model/hobby pilot who contacts the airport with a flight notice.

If an airport does not object and a mishap occurs, will the FAA (or the NTSB, or a jury) conclude that the airport erroneously deemed the proposed activity as safe and NOT "endangering the safety of the NAS"?

What "safety reasons" is the FAA addressing in its answer to this question? How will any local airport manager know whether or not any particular model/hobby pilot -- and his/her equipment is *safe*? Safety, of course is not an all-or-nothing concept. How is an airport manager supposed to accurately determine whether or not a particular model UAS flight will be *safe enough* for the airport to not object? How will an airport manager even know anything about any particular "safety reasons" applicable to a given model/hobby pilot?

Also, the FAA's answer to this question assumes that an airport's local law enforcement personnel will know how to deal with a call from someone at the airport about safety concerns. Should we assume that local police will probably have a difficult time investigating such a call?

FAA Question No. 9. What are best practices when I am made aware of a proposed model aircraft flight within five statute miles of my airport?

FAA Answer:

- Document the conversation with the model aircraft operator, including any objections you made to their proposed flight.

- Issue a Notice to Airmen (NOTAM), if necessary.

RAK Comments: Interesting: the FAA's list of "best practices" includes only two ideas! The first one ("document the conversation") is rife with problems and ambiguities. For instance, it assumes there is an actual conversation between airport personnel and the model/hobby operator. The notice rule, however, does not require that the model/hobby pilot actually talk to the airport manager. If the airport manager and the UAS pilot actually have a serious exchange of information about all the topics referenced in the answers to questions 3-8, it could be a very long conversation. Clearly, documentation will probably be important if there is a mishap. This question and the answer hint at the dangers and liability issues underlying this whole topic. Essentially, the FAA is saying that airports have some duty to make model UAS operations safe. The FAA is also saying, "Look out for potential liability problems." Is the FAA's

approach to these safety risks, and its guidance for airport managers, 100% proper and complete?

The second "best practice" is also problematic. The FAA is instructing airport managers (both public and private) to issue their own NOTAMs about the flights of model/hobby UAS pilots near their airports . . . , "***if necessary***"! How is the airport manager supposed to decide if a NOTAM about a particular model/hobby pilot "is necessary"? What guidelines have been published by the FAA to help the airport manager make this decision? Should the airport manager issue a NOTAM for every notice of model/hobby UAS flights near the airport? Should the airport manager adopt a policy to never issue a NOTAM? Should the airport manager only issue an NOTAM once in a while? For the occasional NOTAM issuer; what rules will he/she follow?

FAA Question No. 10. Is the Airport Traffic Control Tower (ATCT) notified by the operator of a model aircraft flight that occurs within five statute miles of the airport?

FAA Answer:

Section 336 of Public Law 112-95 requires the model aircraft operator to notify the airport traffic control tower (ATCT) if the proposed flight is located within five statute miles of the ATCT, if there is an ATCT at the airport. A best practice is to coordinate communications between the ATCT and the airport operator to share information on notifications and possible unsafe operations.

RAK Comments: This answer finishes with a strange phrase: "*share information on notifications and possible unsafe operations.*" It implies that ATCT personnel are expected to share information about "*unsafe operations*" with airport management. When? How? Why?

It makes sense for model/hobby pilots to give notice to the ATCT about their flights because ATCT personnel are in direct communication with the pilots of a manned aircraft in the vicinity of the airport (at least while the tower is open). Airport personnel, on the other hand, are probably NOT talking to pilots in the air on the radio about "unsafe operations" around the airport.

It is also important to realize that the FAA oversees the day-to-day operations of ATCT personnel. (Even contract tower personnel are working for the FAA.) The same cannot be said about airport personnel. It is probably wise for the FAA to create a set of rules for ATCT personnel to use while interacting with model/hobby UAS pilots and airport managers. However, when it comes to how the FAA can/should instruct airport managers on "best practices" for communicating with ATCT personnel and model/hobby pilots, the roles and responsibilities are less clear -- leaving airport personnel in some limbo.

FAA Question No. 11. What should I do if I see a model aircraft being operated in a manner that could interfere with manned aircraft flight or other uses (e.g. skydiving)?

FAA Answer:

Airport operators have an important responsibility to keep the airport and the surrounding areas free from hazards that could impact the safe operation of the airport. Airport operators are also in a unique position to observe and identify activity near an airport that could impact the safety of the NAS. Accordingly, if you observe a model aircraft being operated in a manner that interferes with manned aircraft flight or other uses at your airport:

- *Contact the airport traffic control tower (ATCT), if one is located at your airport.*
- *Contact your local law enforcement agency to detect and immediately investigate and as appropriate, pursue enforcement actions to stop the use. Please refer to FAA Guidance for Law Enforcement.*
- *Notify the FAA's 24 hours Regional Operations Center (ROC). Find ROC contact information.*
- *To assist in the investigation of the event, the airport operator may wish to:*
 - *Keep good documentation of the time/location of the event;*
 - *Take pictures and/or capture video recordings of the activity, if possible;*
 - *Attempt to determine the type of activity; and*
 - *Attempt to determine the location of the operator of the model aircraft.*

RAK Comments: The first sentence of the FAA's answer to this question is disturbing in the UAS context. The phrase "free from hazards" puts a huge burden on airport managers when it comes to model/hobby pilots. It is important to understand and consider the differences between unlit towers, cranes, and even birds near an airport -- and drones. Unlike some potential hazards for which airports traditionally issue NOTAMs, UAS hazards have their own pilots. Doesn't it make sense to make UAS pilots ultimately responsible for keeping the airspace surrounding an airport "free from [UAS] hazards"; and not airport personnel?

After the first sentence of the answer, the FAA appears to be sending an appropriate message. It is undeniable that airport personnel are "in a unique position to observe and identify activity near an airport that could impact the safety of the NAS." Accordingly, observing unsafe activities -- UAS or otherwise -- and reporting to other governmental officials who may take steps to stop it; or seek some legal penalties against the unsafe pilot; seems very reasonable. It also seems reasonable to ask airport personnel to make notes, take photos, and determine the location and type of activities observed.

FAA Question No. 12. How can I help ensure model aircraft are operated safely near my airport?

FAA Answer:

- *Consider conducting community outreach activities that educate the public on model aircraft operators' responsibilities and requirements.*

- Consider sharing information on the areas where manned flights normally occur at your airport.
- Establish a local process that allows you to effectively discuss proposed model aircraft operations within five statute miles of your airport.
- Enlist the assistance of local Law Enforcement Agencies to help identify operations near your airport that could impact the safety of the NAS.
- Encourage the use of the BAUFLY app.

RAK Comments: This question is odd because it suggests that airport managers have a legal duty to "ensure model aircraft are operated safely near [their] airport[s]." Where does this duty come from; and how far does it extend?

At least part of the answer to the first half of my question points to the "notice" rule in the 2012 Act. Like it or not, the rule requiring that UAS pilots put airport managers on notice of potentially unsafe use of the airspace surrounding the airport, suggests that airports have a duty to act reasonably with that information.

Airport managers may be surprised, however, to see the FAA say that they should be "conducting community outreach activities that educate the public on model aircraft operators' responsibilities and requirements." Equally surprising may be the FAA's suggestion that airport managers should "establish a local process that allows [them] to effectively discuss proposed model aircraft operations."

Even the suggestion that airport managers should be creating methods for "sharing information on the areas where manned flights normally occur at your airport," seems beyond the normal day-to-day activity of typical airport managers.

How should these **educational** tasks be performed? Lengthy personal phone calls? Instructive emails? Classroom lessons? Personal tours? Group tours? Brochures? Booklets? Webpages?

FAA Question No. 13. Does the FAA provide guidance on local and state regulation of Unmanned Aircraft Systems (UAS)?

FAA Answer:

Yes, the FAA has a fact sheet on state and local regulation of unmanned aircraft systems (UAS) that provides information for states and municipalities considering laws or regulations addressing UAS use. The document outlines FAA's safety reasons for federal oversight of aviation and airspace, and explains federal responsibility in this area.

The fact sheet provides examples of state and local laws affecting UAS for which consultation with the FAA is recommended, such as restrictions on flight altitude or flight paths, regulation of the navigable airspace, and mandating UAS-specific equipment or training.

The fact sheet also gives examples of UAS laws likely to fall within state and local government authority, such as requirements for police to obtain a warrant prior to using UAS for surveillance; prohibitions on the use of UAS for voyeurism; exclusions on using UAS for hunting or fishing, or harassing individuals engaged in those activities; and prohibitions on attaching firearms or other weapons to a UAS.

RAK Comments: This question and the answer are remarkable for what is not said to airport personnel. The question seems to recognize that most public airports are owned and operated by local governments. The answer, however, seems to instruct local government officials to **consult** with the FAA before trying to create any safety-related UAS rules. Look at the last paragraph of the answer. The subjects mentioned there appear to be quite remote from any core airport-related safety concerns.

On the other hand, the middle paragraph in the answer cautions local governments (including airport personnel) to NOT try, without FAA permission, to make any rules governing UAS pilots and any "*restrictions on flight altitude or flight paths, regulation of the navigable airspace, [or] mandating UAS-specific equipment or training.*"

Compare and contrast this question/answer combination (#13) with the prior one (#12). It seems that such things as restrictions on flight altitude or flight paths, or mandating UAS-specific equipment or training could go a long way towards ensuring safe UAS operations near airports.

Look at the dilemma facing airports. The 2012 Act prohibits the FAA from creating specific safety rules for model/hobby pilots; and the FAA is telling local governments who own/operate airports that they can't create such laws without FAA permission. Does this sound like a "catch 22"?

SOME IDEAS FOR AIRPORTS RESPONDING TO UAS MODEL PILOT FLIGHT NOTICES

Airport managers need to consider how they intend to deal with model/hobby UAS pilots who call or send emails providing notice of their planned UAS flying within 5 miles of their airports. While the ideas in this article reveal a complicated work-in-progress for all of us, here are some of the messages airport managers may want to consider sharing with model/hobby UAS pilots:

- **"Thank you."** It is probably a good idea to maintain a polite, professional, and courteous approach with the model/hobby UAS pilots who will be calling airports — in ever increasing numbers — about their planned UAS flights. So, the first thing an airport manager should consider doing in response to these notices, is to thank the pilot for contacting the airport.
- **The airport does not authorize UAS flights.** As mentioned in the FAA Q&A section above, the airport notification scheme created by the 2012 Act, allows an airport manager to tell a model/hobby UAS pilot that the airport objects to UAS flights near the airport. To protect airports from potential liability for having impliedly (or expressly) authorized unsafe UAS flying near them, airports may want to consider establishing a

policy of informing all model/hobby UAS pilots that the airport objects to, and does not authorize, any UAS operations near their airports. UAS pilots should understand that they fly "at their own risk." They should not be led to believe that, by giving notice to the airport, the airport has or will assumed the responsibility to take any affirmative steps to protect the pilot from the dangers the pilot creates by choosing to fly his/her UAS near an airport.

- **Invite the UAS pilot to visit the airport for a tour.** It is probably safe to assume that most model/hobby UAS pilots are unfamiliar with basic airport operations. Therefore, it may be a good idea to invite the UAS pilot to visit the airport and give him/her a tour. During the visit, the UAS pilot should have an opportunity to see a variety of aircraft taking off, landing, taxiing, entering/exiting the pattern, etc. During the tour, the airport manager could give the UAS pilot an opportunity to listen to transmissions on the UNICOM and/or ATC radio frequencies. The tour could also include an invitation to sit in an aircraft, meet an instructor, and or meet a mechanic. The tour could also create an opportunity to start working on an LOA with the model UAS pilot. (As most of us know, the aviation community is experiencing a growing pilot shortage crisis. The FAA predicts that there will be tens of millions of new UAS pilots in the next few years. Airport tours triggered by UAS flight notices to airports may give us an opportunity to find some new student pilots!)
- **UAS pilot disclosures.** Airports should also consider what, if any, disclosures they want from the model/hobby UAS pilot who is giving the airport notice of planned flying near the airport. A request for disclosures could include text along these lines: "If you decide to fly within five miles of the airport, we expect you to go to our website [or send us an email] and make the following disclosures: (a) your location; (b) your FAA registration number, (c) the make and model of your aircraft, (d) the purpose of your flight; (e) your flight path; (f) your altitude; and (g) your start and stop times." Can you think of other disclosures that should be made by these pilots?
- **UAS pilot verifications.** The UAS pilot who is giving the airport notice of planned flying may also be instructed to go to the airport website, or send an email, and verify the following: (a) the pilot will comply with Section 336 of the 2012 Act; (b) the pilot has read and is familiar with the B4UFLY FAA program; (c) the pilot will preflight his aircraft before flying; (d) the pilot will comply with the applicable community based safety codes; (e) the pilot will see and avoid all manned aircraft; (f) the pilot will not operate in a careless or reckless manner; (g) the pilot has liability insurance covering his flying activities; and (h) the pilot will indemnify the airport for any loss, harm, or damage caused by his/her UAS flying activities near the airport. Can you think of other verifications that should be made by these pilots?
- **Instruct the UAS pilot to call Flight Service, or go to the Flight Service webpage, and post a NOTAM or a UOA (Unmanned Operating Area) notification.** It may be a good idea for airports to tell UAS pilots to talk to a Flight Briefer or use the Lockheed Martin website (www.1800wxbrief.com) to announce their flight intentions. This approach

could allow the UAS pilot to share information about their UAS operations directly with the folks who need to know — pilots of manned aircraft.

WHAT DOES THE FUTURE HOLD?

On April 19, 2016, the U.S. Senate passed its FAA Reauthorization Bill. All airport managers should follow the reauthorization process. In particular, airport managers should realize that that Senate Bill includes some text making a slight revision to the part of Section 336 of the 2012 FAA Modernization and Reform Act dealing with notice to airport managers about hobby operations.

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