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FAA, Where Are You?

By Alan Frazier, Deputy Sheriff, Grand Forks (ND) County Sheriff's Office, Associate Professor, University of North Dakota's John D. Odegard School of Aerospace Sciences

A few of you may recall (albeit probably from reruns) the early 1960s television series "Car 54, Where Are You?" Fred Gwynne (Herman Munster) played the part of NYPD patrolman Francis Muldoon, and Joe Ross played Muldoon's partner, Gunther Toody. Muldoon and Toody were assigned to a radio car in the fictional 53rd Precinct. Muldoon was a fairly squared-away cop. Toody was a loveable bumbling idiot. There are striking similarities to be drawn between Car 54 and FAA's approach to law enforcement small unmanned aircraft systems (sUAS) use.

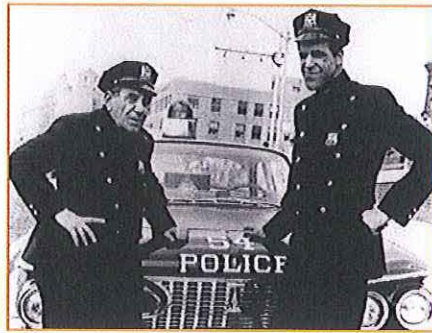
Playing the part of Muldoon are local air traffic control facility personnel and the front line in the Unmanned Aircraft Systems Integration Office. These dedicated folks routinely work hard to solve problems and are a joy to work with. Unfortunately, the Muldoons disappear above the FAA's first line level and are replaced by a collection of Toody's that wouldn't know an sUAS if one ran into them. The Toody's seem to be most prevalent in the FAA's Regional Offices and Office of the Chief Counsel.

Lest you think that I am making hasty judgements, consider the following examples of FAA Toody's at work.

Catch 22

Public safety agencies applying for certificates of authorization (COAs) or waiver must obtain a letter from their state attorney general attesting they represent a political subdivision of the state. The fact that almost all states define all cities and counties as "political subdivisions of the state" seems to be of little concern to FAA's Office of the Chief Counsel. Herein lies one of the first non-sequiturs of the FAA's approach to law enforcement use of sUAS: The declaration of "political subdivision" is required to prove that the applying agency is eligible to operate a "public aircraft." Agencies operating public aircraft are relieved of the obligation to comply with many FAA regulations, including airworthiness certificates, pilot certificates and medical certificates. However, law enforcement COAs require that sUAS operators possess FAA second class medical certificates.

COAs are arguably not the best mechanism to allow access to the National Airspace System. FAA now routinely grants commercial operators with "blanket 333 exemptions." (This refers to Section 333 of the *FAA Modernization and Reform Act of 2012*, which gives the FAA administrator the authority to grant sUAS operating authorization on a case-by-case basis.) This allows operation of commercial sUAS anywhere in Class G



Toody (Joe Ross) and Muldoon (Fred Gwynne) on the job in "Car 54, Where Are You?"
Photo courtesy of CBS Television Distribution.

airspace below 200 feet AGL. This liberalness towards commercial sUAS operators is in stark contrast to the restrictiveness of COAs currently used by law enforcement agencies.

Take for example the recent attempt by the Mesa County (CO) Sheriff's Office (MCSO) to use an sUAS to search for a murder victim's body in an abandoned mine shaft. MCSO is a pioneer in the use of sUAS. The standards and policies written by MCSO sUAS Program Manager Ben Miller have been emulated by agencies throughout the world. But in this particular case, when Miller telephoned FAA to enquire if they wished to review his desired use of an sUAS to search a subterranean mine shaft, it took the administration 24 hours to inform him that yes, he would need permission (presumably an emergency COA) to lift off into Class G airspace, climb to 2 feet AGL, move forward approximately 5 feet and descend into an underground mine shaft. Keep in mind FAA has jurisdiction over "navigable airspace." Apparently, someone at the administration felt an altitude of 2 feet AGL in Class G airspace is navigable airspace. Had Miller decided to fly the sUAS as a hobbyist, he could have flown up to 400 feet AGL without any FAA approval or oversight.

Bogged Down in Bureaucracy

The Grand Forks County (ND) Sheriff's Office (GFSO) has been flying three different sUAS within a 16-county, 18,000-square-mile area covered by three COAs for more than 18 months. The COAs permit day and night operations below 400 or 700 feet AGL (depending on the airframe) and include Class G, E and D airspaces. Recently, GFSO requested FAA approval to expand operations to include a 17th county. That approval took over 80 days to achieve, and when it came (via a "pen and ink" change), it effectively eliminated GFSO's ability to operate in

the Class D airspaces the agency had been safely flying in for over a year and a half.

An FAA employee at the Central Service Region decided a letter of agreement (LOA) with each air traffic control tower facility was necessary. (Apparently this requirement is buried in an FAA guidance document.) These were being required despite the fact that each facility had thoroughly vetted the COAs and each had copies of the agreements. GFSO requested 60 days to draft and execute the requested LOAs. FAA denied the request. GFSO appealed the denial all the way to Jim Williams, manager of FAA's UAS Integration Office. At each step of the appeal, GFSO asked, "How will safety be enhanced by executing an LOA?" and "Why was it safe to operate in Class D last week but unsafe now?" No one at FAA had an answer to either question. GFSO was told the LOA was required by an "FAA guidance document." GFSO told Williams it was inevitable they would have to respond to an incident within one of the Class D surface areas before the LOAs were executed. Williams advised that an emergency COA (ECO) would be issued to handle such an incident. When reminded that FAA's past practice on ECOAs was a showing of "imminent threat to life," Williams assured GFSO that the standard had been relaxed and there would be no problem getting an ECOA for any law enforcement incident. Sure enough, 10 days later, the GFSO UAS Unit responded to Fargo, ND, to document an officer involved shooting scene. The crime scene was within the Fargo Class D surface area. En route to the scene, the GFSO UAS pilot coordinated access to the airspace with the FAA Fargo ATC Tower Supervisor.

After four hours of telephone calls and emailing PDF ECOA worksheets to FAA, the administration still had not issued an ECOA. With daylight fast receding, the GFSO supervisor informed the third FAA official with which he was required to speak the ECOA had to be issued within the next 15 minutes to be of any use. The FAA official (a manager in the FAA's UAS Integration Office) issued a "verbal ECOA." Final coordination with Fargo ATC Tower was quickly accomplished, and the mission was completed within 12 minutes below 200 feet AGL.

The following day, FAA advised GFSO the official who granted the ECOA did not have the authority to do so. In addition, GFSO was advised that since the incident did not represent an immediate threat to life, the decision had been made by other FAA bureaucrats not to issue an ECOA. A month later, GFSO had not received the written ECOA. Grand Forks Sheriff Bob Rost sent a



U.S. Department of Transportation
Federal Aviation Administration

800 Independence Avenue, SW
Washington, DC 20591

JUL 2 2015

Sheriff Robert W. Rost
Grand Forks County Sheriff's Department
122 South Fifth Street
Grand Forks, ND 58208-2608

Dear Sheriff Rost:

Administrator Huerta asked me to respond to your June 5 letter regarding the challenges you encountered obtaining an Emergency Certificate of Waiver or Authorization (COA) to use an unmanned aircraft system (UAS) to investigate an officer-involved shooting on June 4.

In your letter, you cite that approval for the emergency COA took more than four hours. The process for COA approval required coordination between the Federal Aviation Administration's (FAA) Air Traffic Control, Service Center(s), and the Grand Forks Sheriff's Department. Since the FAA's primary responsibility is to ensure safety of the National Airspace System (NAS), we must ensure that all COAs, including emergency COAs, are thoroughly evaluated for safety risks before issuing approval.

The FAA is currently evaluating the handling of your particular COA request as well as existing processes for the handling and processing of all emergency COAs. Our goal is to determine opportunities for streamlining the approval process and reducing the timeframe from request to approval.

The FAA appreciates the commitment of the Grand Forks County Sheriff's Department to follow established processes and procedures that help maintain the safety of the NAS, and the example your department sets for other law enforcement agencies across the country who wish to use a UAS for law enforcement purposes. Thank you again for sharing your feedback and concerns.

I trust this information is helpful.

Sincerely,

John Duncan
Director, Flight Standards Service

Above: FAA reply to complaint letter sent by Grand Forks (ND) Sheriff Bob Rost.

letter of complaint to FAA Administrator Michael Huerta. The reply to that complaint (reprinted here) cites "safety" as the reason for the delay, despite the fact that the flight had been subjected to a full risk analysis, a NOTAM was issued and coordination was completed with the affected ATC facility.

Widespread Confusion

Recently, FAA inspectors assigned to the FAA's UAS Integration Office were given two hours to brief an ALEA conference course on FAA guidance related to sUAS. The briefing was, to say the least, disappointing. One inspector spent over an hour reading FAA guidance documents verbatim. When the class members began asking questions, the briefing circled the drain due to the second FAA inspector providing erroneous information.

The media is fond of reporting on "near misses" of sUAS with manned aircraft. To date, not a single one of these near misses has been with a public safety sUAS. Given the fact that law enforcement agencies utilizing sUAS train regularly, keep their sUAS in sight at all times, have established policies and procedures, operate in compliance with FAA issued COAs and issue NOTAMS, it is highly unlikely that a law enforcement sUAS will conflict with a manned aircraft.

FAA must realize agencies complying with all current FAA guidelines do not pose a significant risk to manned aircraft. Rather, it is the thousands of newly minted hobbyists, over 1,000 new 333 exemption holders that have been rushed through the FAA approval process, and below-the radar commercial operators that pose the greatest risk to manned aviation.

FAA would be advised to direct its efforts towards these sUAS operators rather than wasting time and energy holding law enforcement's feet to the fire on bureaucratic guidance documents. Law enforcement sUAS save lives and assist in the investigation of serious crimes, accidents and natural disasters. We are not operating sUAS to make money. Law enforcement needs a dedicated 24/7 FAA contact for ECOAs. The current ECOA system is broken and is proving to be a significant impediment to law enforcement. In the short term, law enforcement agencies requesting ECOAs would be wise not to disclose the nature of the incident to FAA. Operational security will be safeguarded, and the administration will not be placed in the position of determining the urgency of the law enforcement sUAS mission.

FAA, law enforcement sUAS operators hope you determine where your Car 54 is.

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